Safety Data Sheets – Table of Contents

Safety Data Sheet

Conforms to HCS 2012 (29 CFR 1910.1200)

Section 1. Identification

Product identifier

Product Name: **O'REILLY SYNTHETIC DOT 3 BRAKE FLUID**

Other names: Heavy Duty High Temp Formula Synthetic DOT3 Brake Fluid

Part/Product Number(s): **72105-3, 72120, 72126**

Material Use: Automotive brake fluid

Uses advised against: No information available

Manufacturer:
Omni Specialty Packaging, LLC
10399 Hwy 1 South
Shreveport, LA 71115
1-318-524-1100

Issuing date: July 13, 2015

Revision date: July 13, 2015

Revision number: 001

Company contact: OMNI EHS Department; E-Mail: sds@osp.cc; Contact phone: 318-524-1100
(Monday-Friday, 8:00 AM – 4:00 PM, CST)

In case of emergency:
CHEMTREC: Within USA and Canada: 1 (800) 524-9300 (24/7)
CHEMTREC Outside USA and Canada: +1 703-527-3887 (24/7)

Section 2. Hazards Identification

OSHA/HCS Status: This product is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the Substance or Mixture: Serious Eye Damage/Eye Irritation – Category 1

GHS Label Elements

Hazard pictograms:

Signal word: DANGER

Appearance: Clear **Physical State:** Liquid **Odor:** Petroleum distillates

Physical Hazard statement: None

Health Hazard statement: Harmful if swallowed.
Causes serious eye damage.

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Wear eye/face protection.
Wear protective gloves/protective clothing/eye protection/face protection

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Storage: Store locked up.

Disposal: Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC): No data available.

Other information: No information available.

Section 3. Composition/Information on Ingredients

Automotive brake fluid and additives mixture.

Substance/mixture: Mixture

Components Name	CAS number	Weight %*
Triethylene glycol, monobutyl ether	143-22-6	50-60
Diethylene glycol, monobutyl ether	112-34-5	20-30
Triethylene glycol	112-27-6	10-15

* The exact percentage of composition has been withheld as a trade secret.

Section 4. First Aid Measures

Description of necessary first aid measures

General Advice: No specific first aid measures are required. Get medical attention if irritation develops and persists.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation or allergic reaction develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion: If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Call a POISON CERTER or doctor/physician if symptoms occur.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Most Important Symptoms and Effects: Personnel with pre-existing skin disorders should avoid contact with this product. Under normal use conditions, no adverse effects to health are known.

Eye contact: Causes serious eye irritation. Symptoms may include burning, red eyes and tearing.

Skin contact: Contact with skin is not expected to cause prolonged or significant irritation. Contact with skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Inhalation: May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficult breathing.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Note to physician: Treat symptomatically.

Section 5. Fire-Fighting Measures

Uniform Fire Code: Combustible liquid

Flash Point: 203°C (397.4°F)

Extinguishing Media

Suitable Media: In case of fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water fog, alcohol resistant foam, dry chemical, carbon dioxide (CO2) extinguisher or spray.

Unsuitable Media: None.

Specific Hazards Arising from the Chemical: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritation.

Hazardous Combustion Products: Combustion products may include the following: Carbon dioxide (CO2) Carbon monoxide (CO), and trace amounts of Nitrogen oxides.

Protection of Fire Fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Do not get in eyes. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). See Section 12 for ecological information.

Methods and materials for containment and cleaning up

Small Spills: Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large Spills: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

NOTE: If RQ (Reportable Quantity) is exceeded or if spills enter a body of water, report immediately to the USEPA's National Response Center at (800) 424-8802. Check with your local and state regulators regarding their reporting requirements.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures: Do not get in eyes. Eye protection and face shield should be used. Put on appropriate

personal protective equipment (see Section 8). Keep out of reach of children.

Advice on general occupational hygiene: Do not get in eyes, on skin or on clothing. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas.
See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, Including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, strong oxidizing agents (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use.

Section 8. Exposure Controls/Personal Protection

Control parameters

This product does not have any hazardous materials with occupational exposure limits established by region specific regulatory bodies.

Occupational Exposure Limits

Chemical name	ACGIH		OSHA		NIOSH	
	TLV	STEL	PEL	STEL	TWA	Ceiling
Triethylene glycol, monobutyl ether CAS 143-22-6	None listed	None listed	None listed	None listed	None listed	None listed
Triethylene glycol CAS 112-27-6	None listed	None listed	None listed	None listed	None listed	None listed
Diethylene glycol monobutyl ether CAS 112-34-5	None listed	None listed	None listed	None listed	None listed	None listed

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Emergency shower and eyewash station.

Environmental exposure controls: None specific.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Wear safety glasses with side shields. A face shield and goggles may be necessary under some conditions.

Skin and Body Protection

Hand protection: Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Butyl rubber, Neoprene, Nitrile/butadiene rubber (Nitrile or NBR), Polyvinyl chloride ("PVC" or "vinyl"). Consult your supervisor or Standard Operating Procedure (SOP) for special handling instructions.

Body protection: No protective equipment is needed under normal use conditions. Wear clean body-covering clothing. For non-routine tasks, personal protection equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection: No respiratory protection is normally required.

Section 9. Physical and Chemical Properties

Appearance **(Typical or Target)**
Physical State: Liquid

Color:	Clear
Odor:	Etheric
Odor threshold:	Not available
pH:	10.5 SUS
Boiling Point:	232.2°C (450°F) (Typical or Target)
Flash Point (Closed cup):	203°C (397.5°F) (Typical or Target)
Evaporation rate (Butyl acetate = 1):	Not available
Flammability (solid, gas):	Not applicable. Based on - Physical state
Flammable) Limit in Air:	Not available
Vapor pressure:	Not available
Vapor density (Air = 1):	>1
Relative density:	1.015 kg/l at 15°C (Typical or Target)
Solubility:	Completely soluble in water
Partition coefficient (n-Octanol/water):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity – Kinematic (cSt (mm2/s)@ 40°C):	Not available
Viscosity – Dynamic (cSt (mm2/s) @ 100°C):	Not available
VOC %:	0% Not a VOC

Section 10. Stability and Reactivity

Reactivity:	Not reactive under normal storage conditions
Chemical stability:	Stable under normal storage conditions
Possibility of hazardous reactions:	None under normal processing.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	None known based on information supplied.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	May include: Fumes, Smoke, Carbon Oxides (including carbon monoxide and carbon dioxide) and incomplete combustion products.

Section 11. Toxicological Information

Information on toxicological effects

Product Information

Inhalation:	May cause irritation of respiratory tract.
Skin Corrosion/Irritation:	May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Serious Eye Damage/Irritation:	Causes serious eye damage.
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Triethylene glycol, monobutyl ether	= 5300 mg/kg (Rat)	= 3480 mg/kg (Rabbit)	-
Diethylene glycol, monobutyl ether	= 3384 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-
Triethylene glycol	= 15000 mg/kg (Rat)	= 22460 mg/kg (Rabbit)	-

Aspiration hazard:	Not expected to be an aspiration hazard.
Skin Sensitization:	No information available.
Respiratory Sensitization:	No information available.
Specific Target Organ Toxicity	
Single Exposure (STOT-SE):	No information available.
Repeated Exposure (STOT-RE):	No information available.
Carcinogenicity:	Contains no ingredients listed as a carcinogen.
Germ Cell Mutagenicity:	No information available.
Reproductive Toxicity	No information available.

Information on Toxicity Effects of Compounds

Symptoms: Eye contact with liquid may cause irritation including stinging, burning, tearing or redness of the eyes.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

Acute Toxicity Estimate (ATEmix) - Oral: 5191 mg/kg (Category 5)

Acute Toxicity Estimate (ATEmix) - Dermal: 3658 mg/kg (Category 5)

Section 12. Ecological Information

The information is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity: The environmental impact of this product has not been fully investigated

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Triethylene glycol, monobutyl ether	EC50 72h: >500 mg/L (Desmodesmus subspicatus)	LC50 96h: 2200-4600 mg/L Static (Leuciscus idus) LC 50 96h: = 2400 mg/L (Pimephales promelas) LC50 96h = 2400 mg/L Static (Pimephales promelas)	Not available	EC50 48h: >500 mg/L (Daphnia magna)
Triethylene glycol	Not available	LC50 96h: = 56200-63700 mg/L flow-through (Pimephales promelas) LC50 96h = 10000 mg/L Static (Leuciscus macrochirus) LC50 96h = 61000 mglL flow-through (Lepomis macrochirus)	EC50 = 850 mg/L 5 min	EC50 48h: =42426 mg/L (Daphnia magna)
Diethylene glycol monobutyl ether	EC50 72h: >100 mg/L (Desmodesmus subspicatus)	LC50 96h: = 1300 mg/L Static (Leuciscus macrochirus)	Not available	EC50 48h:= 2850 mg/L (Daphnia magna)

Mobility: No information available.

Soil/water partition coefficient (K_{OC}): No information available.

Persistence and degradation

Biodegradation: No information available.

Bioaccumulative potential

Bioaccumulation: No information available.

Other adverse effects: No information available.

Other ecological information: No information available.

Section 13. Disposal Considerations

Disposal recommendations based on material supplied.

Waste Disposal methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Consult the appropriate state, regional, or local regulations for additional requirements. The generation of waste should be avoided or minimized wherever possible.

Contaminated packaging: Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

General information:

	DOT Classification	IMDG	IATA
Brake Fluid DOT 3	Not Regulated	Not Regulated	Not Regulated

Special precautions for user: Transport within user's premises: Always transport in closed containers that are upright and secure

Section 15. Regulatory Information

United States Regulations

United States Inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304: No products were found.

SARA 311/312:

Immediate (Acute) Health Effects:	Yes
Delayed (Chronic) Health Effects:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313:

The following components of this material are found on the EPCRA 313 list:

Components Name	CAS number	Weight %*	SARA 313 – Threshold Values %
Triethylene glycol, monobutyl ether	143-22-6	50-60	1.0
Diethylene glycol monobutyl ether	112-34-5	20-30	1.0

CWA (Clean Water Act): This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA: This material, as supplied, does not contain any substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

State Regulations

Massachusetts: None of the components are at or above regulated thresholds.
New Jersey: None of the components are at or above regulated thresholds.
Illinois: Triethylene glycol monobutyl ether, Diethylene glycol monobutyl ether,
Pennsylvania: Triethylene glycol monobutyl ether, Diethylene glycol monobutyl ether, Triethylene glycol
Rhode Island: Triethylene glycol
California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer. None.

Canada

WHMIS Hazard Class: B3 – Combustible liquid

International Chemical Inventories:

All components comply with the following chemical inventory requirements: DSL (Canada)

Section 16. Other Information

NFPA Rating:	**Health Hazard – 2**	**Flammability – 1**	**Instability/Reactivity – 0**	
HMIS Rating:	**Health Hazard – 2**	**Flammability – 1**	**Physical Hazards – 0**	**PPE - B**

(NFPA & HMIS Hazard Rating Key: 0 - Minimum Hazard; 1 - Slight Hazard; 2 - Moderate Hazard; 3 - High Hazard; 4 - Extreme Hazard; * - Chronic Hazard Indicator, & PPE - Personal Protective Equipment Index A to L. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS or Hazardous Material Identification System).

Key to abbreviations:

OSHA = Occupational Safety and Health Administration
ACGIH= American Conference of Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service Registry Number
cSt = Centistroke (mm2/s)
LogPow = logarithm of the octanol/water partition coefficient
OEL = Occupational Exposure Limit
SDS = Safety Data Sheet
STEL = Short term exposure Limit
UN = United Nations
UN Number = United Nations Number, a four digit number

GHS = Global Harmonized System of Classification and Labeling Of Chemicals.
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods assigned by the United Nations Committee of Experts on the Transportation of Dangerous Goods

Prepared By: **OMNI Specialty Packaging EH&S Department**

Revision Date: **July 15, 2015**

Status: **Final**

Revision Note: **Revision #001 of the OSHA GHS SDS format.**

Consumer Product Improvement Act of 2008, General Conformity Certification

For Consumer Product Packages: This product has been evaluated and is certified to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission. Where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No testing is required to certify compliance with the provisions. The date of the manufacturing is stamped on the product container.

Disclaimer

All reasonably practicable steps have been taken to ensure the information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This information is furnished upon condition that the person receiving it shall make their own determination of the suitability of the material for their particular purpose.

End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 24-Mar-2016 **Version** 4

1. IDENTIFICATION

Product identifier

Product Name FAST ORANGE PUMICE LOTION HAND CLEANER 15 FL.OZ

Other means of identification

Product Code 25122
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Hand Cleaner or Soap - Heavy Duty
Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

Distributor
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

Company Phone Number 1-87-Permatex
(877) 376-2839

24 Hour Emergency Phone Number Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

E-mail address mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance White **Physical state** Lotion **Odor** Citrus

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
- May cause sensitization especially in sensitive humans

Unknown acute toxicity 12.01 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

substance(s)

Chemical Name	CAS No	Weight-%	Trade Secret
WATER	7732-18-5	60 - 100	*
PUMICE	1332-09-8	5 - 10	*
ETHOXYLATED C11-C16 ALCOHOL	127036-24-2	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice Get medical advice/attention if you feel unwell.

Eye contact IF IN EYES:. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin contact None under normal use conditions.

Inhalation None under normal use conditions.

Ingestion IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Avoid contact with eyes.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2), Dry chemical, Foam

Unsuitable extinguishing media
None.

Specific hazards arising from the chemical
None in particular.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep from freezing.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
Appropriate engineering controls

Engineering Controls Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/face protection No special technical protective measures are necessary.

Skin and body protection None under normal use conditions.

Respiratory protection None under normal use conditions.

General Hygiene Considerations Avoid contact with eyes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Lotion

Appearance	White
Odor	Citrus
Odor threshold	No information available

Property	Values	Remarks • Method
pH	6.0-8.5	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 100 °C / >212 °F	
Flash point	> 95 °C / > 203 °F	
Evaporation rate	> 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	>1	Air = 1
Relative density	1.06	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	<1%
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Excessive heat. Keep from freezing.

Incompatible materials
Strong oxidizing agents

Hazardous Decomposition Products
Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation None known.

Eye contact Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion None known.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
WATER 7732-18-5	> 90 mL/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
Not classifiable as a human carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 382796 mg/kg
ATEmix (dermal) 435430 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

97.65 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number Not applicable

14. TRANSPORT INFORMATION

DOT

Proper shipping name: Not regulated

IATA

Proper shipping name: Not regulated

IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not Listed.
ENCS	Not Listed.
IECSC	Complies
KECL	Not Listed.
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
LANOLIN 8006-54-0	-	-	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 1	**Flammability** 1	**Instability** 0	-
HMIS	**Health hazards** 1	**Flammability** 1	**Physical hazards** 0	**Personal protection** B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 24-Mar-2016

Disclaimer
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End of Safety Data Sheet

Safety Data Sheet

Issue Date: 01-Jan-2014 **Revision Date:** 01-April-2017 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name PS, PSH, PSG, PHR, PG, PDC and DCG Valve Regulated (VRLA) Batteries Absorbed Electrolyte (AGM)

Other means of identification

SDS # POWER-001

Recommended use of the chemical and restrictions on use

Recommended Use Battery

Details of the supplier of the safety data sheet

Manufacturer Address
Power-Sonic Corporation
7550 Panasonic Way
San Diego, CA 92154

Emergency Telephone Number

Company Phone Number 1-619-661-2020
Emergency Telephone (24 hr) INFOTRAC 1-800-535-5053 (domestic), 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a nonspillable lead acid battery. The information below is intended for repeated and prolonged contact with the battery contents in an occupational setting. In the absence of an incident or accident, is not likely to apply to normal product use. However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product. Always be aware of the risk of fire, explosion, or burns. Do not short circuit the (+) and (-) terminals with any other metals. Do not disassemble or modify the battery. Do not solder a battery directly. Keep away from fire or open flame.

Appearance Battery **Physical State** Solid containing liquid **Odor** Characteristic

Classification

This product is a battery. The classification below is based on the battery acid contained in the battery, which would only be released during an incident.

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word
Danger

Hazard Statements
Harmful if swallowed
Harmful if inhaled
Causes severe skin burns and eye damage
May damage fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician for all exposures
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Lead	7439-92-1	65-75
Sulfuric Acid	7664-93-9	14-20
Tin	7440-31-5	<.5
Calcium	7440-70-2	<.1
Fiberglass Separator	Proprietary	5
Case material: Acrylonitrile Butadine Styrene (ABS)	Proprietary	5-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret. Inorganic lead and electrolyte (sulfuric acid) are the main components of every Valve Regulated Lead Acid battery supplied by Power-Sonic Corporation. Other ingredients may be present dependent upon the specific battery type. For additional information contact Power-Sonic Corporation Technical Department.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Immediately call a poison center or doctor/physician. Provide this SDS to medical personnel for treatment.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects

Symptoms	Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Not determined.

Hazardous Combustion Products Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen sulfide.
Lead Compounds: High temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment	There is no release of material unless the case is damaged or battery is misused/overcharged. If release occurs stop flow of material, contain/absorb all spills with dry sand, earth, or vermiculite. Do not use combustible materials. Neutralize spilled material with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Dispose of as hazardous waste. Do not discharge acid to sewer.

Methods for Clean-Up Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable. A copy of this SDS must be supplied to any scrap dealer or secondary lead smelter with the battery.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Due to the battery's low internal resistance and high power density, high levels of short circuit current can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools only. Follow all installation instructions and diagrams when installing or maintaining battery systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store batteries in a cool, dry, well ventilated area that are separated from incompatible materials and any activities which may generate flames, sparks, or heat. Keep clear of all metallic articles that could contact the negative and positive terminals on a battery and create a short circuit condition.

Incompatible Materials Sulfuric acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may product toxic sulfur dioxide fumes and may release flammable hydrogen gas.
Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lead 7439-92-1	TWA: 0.05 mg/m^3 Pb	TWA: 50 µg/m^3 Pb	IDLH: 100 mg/m^3 Pb TWA: 0.050 mg/m^3 Pb
Sulfuric Acid 7664-93-9	TWA: 0.2 mg/m^3 thoracic fraction	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Tin 7440-31-5	TWA: 2 mg/m^3 Sn except Tin hydride	TWA: 2 mg/m^3 Sn except oxides (vacated) TWA: 2 mg/m^3 Sn except oxides	IDLH: 100 mg/m^3 Sn TWA: 2 mg/m^3 except Tin oxides Sn

Appropriate engineering controls

Engineering Controls Store and handle batteries in a well ventilated area. If mechanical ventilation is used, components must be acid resistant.

Individual protection measures, such as personal protective equipment

Eye/Face Protection None needed under normal conditions. If handling damaged or broken batteries use chemical splash goggles or face shield.

Skin and Body Protection	None needed under normal conditions. If battery case is damaged use rubber or plastic elbow length gauntlets. In case of damaged or broken battery use an acid resistant apron. Under severe exposure or emergency conditions wear acid resistant clothing.
Respiratory Protection	None required under normal conditions. If battery is overcharged and concentrations of sulfuric acid are known to exceed PEL use NIOSH or MSH approved respiratory protection.
General Hygiene Considerations	Handle batteries carefully to avoid damaging the case. Do not allow metallic articles to contact the battery terminals during handling. Avoid contact with the internal components of the battery.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid containing liquid		
Appearance	Battery	**Odor**	Characteristic
Color	Not determined	**Odor Threshold**	Not determined

Property	**This product is a battery and typical physical/chemical properties do not apply.**	**Remarks • Method**
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.3	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials

Sulfuric acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may product toxic sulfur dioxide fumes and may release flammable hydrogen gas.
Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents.

Hazardous Decomposition Products

Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen sulfide.
Lead Compounds: High temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Inhalation Harmful by inhalation.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric Acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 510 mg/m^3 (Rat) 2 h
Tin 7440-31-5	= 700 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested. IARC has classified "strong inorganic acid mist containing sulfuric acid" as a category 1 carcinogen, substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist. Hazardous exposure to lead can occur only when product is heated, oxidized, or otherwise processed or damaged to create dust, vapor or fume.

Chemical Name	ACGIH	IARC	NTP	OSHA
Lead 7439-92-1	A3	Group 2A	Reasonably Anticipated	X
Sulfuric Acid 7664-93-9	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans

NTP (National Toxicology Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity May damage fertility or the unborn child.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Lead 7439-92-1		0.44: 96 h Cyprinus carpio mg/L LC50 semi-static 1.17: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.32: 96 h Oncorhynchus mykiss mg/L LC50 static		600: 48 h water flea µg/L EC50
Sulfuric Acid 7664-93-9		500: 96 h Brachydanio rerio mg/L LC50 static		29: 24 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable. A copy of this SDS must be supplied to any scrap dealer or secondary lead smelter with the battery.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Lead 7439-92-1		Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K069, K086, K100, K176	5.0 mg/L regulatory level	

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste

Chemical Name	California Hazardous Waste Status
Lead 7439-92-1	Toxic
Sulfuric Acid 7664-93-9	Toxic Corrosive

14. TRANSPORT INFORMATION

Note

Powersonic's nonspillable lead acid batteries are regulated as Class 8 Corrosive hazardous materials / dangerous goods by the U.S. Department of Transportation (DOT) and international dangerous goods regulations referenced below (i.e., IATA Dangerous Goods Regulations and IMDG Code). However, Powersonic's nonspillable batteries are excepted from these regulations because the batteries meet all of the testing, packaging and marking requirements found in the U.S. and international dangerous goods regulations. Therefore, the batteries do not need to be shipped and transported as fully-regulated Class 8 Corrosive hazardous materials / dangerous goods when packaged in accordance with these regulations.

UN Number

2800

DOT

49 CFR 173.159(f) and 49 CFR 173.159a

The batteries have been tested in accordance with the vibration and pressure differential tests found in 49 CFR 173.159(f) and "crack test" found at 49 CFR 173.159a;
When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with 49 CFR 173.159a; and
The batteries and outer packaging must be marked NONSPILLABLE BATTERY as required by 49 CFR 173.159a.

IATA

Packing Instruction 872 and Special Provision A67

The batteries have been tested in accordance with the vibration and pressure differential tests found in Packing Instruction 872 and "crack test" found in Special Provision A67 of the International Air Transport Association (IATA) Dangerous Goods Regulations
When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision A67.

IMDG

Special Provision 238.1 and 238.2

The batteries have been tested in accordance with the vibration and pressure differential tests and "crack test" found in Special Provision 238.1 and 238.2.
When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision 238.1 and 238.2.

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Lead	Present	X		Present		Present	X	Present	X	X
Sulfuric Acid	Present	X		Present		Present	X	Present	X	X
Tin	Present	X		Present			X	Present	X	X
Calcium	Present	X		Present			X	Present	X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sulfuric Acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	65-75	0.1
Sulfuric Acid - 7664-93-9	7664-93-9	14-20	1.0

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead		X	X	
Sulfuric Acid	1000 lb			X

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Lead - 7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive
Sulfuric Acid - 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Lead 7439-92-1	X	X	X
Sulfuric Acid 7664-93-9	X	X	X
Tin 7440-31-5	X	X	X
Calcium 7440-70-2	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	3	0	2	-
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date: 01-Jan-2014
Revision Date: 01-April-2017
Revision Note: 2017 update

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Rev.1.3

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Rayovac Division
3001 Deming Way
Middleton, WI 53562-1431
Phone: (608) 275-3340
Fax: (608) 275-4577
http://www.rayovac.com

SAFETY DATA SHEET

The Safety Data Sheet is supplied as a service to you. For other related information, please visit:
http://www.rayovac.com

1. IDENTIFICATION

PRODUCT NAME:	Alkaline Battery Mercury Free
SIZES:	All sizes
EMERGENCY HOTLINE:	800-424-9300 (24 hr, Chemtrec)
EDITION DATE:	07/01/2017

2. HAZARD IDENTIFICATION

We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirements, Canadian WHMIS requirements or GHS requirements.

Emergency Overview

OSHA Hazards-not applicable
Target Organs-not applicable
GHS Classification-not applicable
GHS Label Elements, including precautionary Statement-not applicable
Pictogram-not applicable
Signal words-not applicable
Hazard statements-not applicable
Precautionary statements-not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS #	%	TLV*/**TWA
Manganese Dioxide	1313-13-9	32-38	C5.0 mg/m^3
Steel	7439-89-6	19-23	---
Zinc	7440-66-6	11-16	5 mg/m^3 (as ZnO Fume)
Potassium Hydroxide	1310-58-3	5-9	Solution Not Listed
Graphite	7782-42-5	3-5	15 mppcf
Barium Sulfate	7727-43-7	<5	15 mg/m^3
Water, paper, plastic, other	---	Balance	---

**Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-2012*

4. First Aid Information

THRESHOLD LIMIT VALUE (TLV) AND SOURCE:	NA
EFFECTS OF OVEREXPOSURE:	None in normal use
EMERGENCY FIRST AID PROCEDURES:	

Skin and Eyes:

Do not pick up a shorting battery as it may cause a burn. Get immediate medical attention when eyes may have been exposed to battery contents from a ruptured battery. Wash skin with soap and water.

Swallowing:

If you or your doctor suspects that a battery has been ingested-for assistance in the US call the NATIONAL BATTERY INGESTION HOTLINE any time at (202) 625-3333: in Canada call 416-813-5900.

For more information, please visit:

http://www.nema.org/Policy/Environmental-Stewardship/Documents/batteryingest.pdf

5. Fire Fighting Measures

FLASH POINT:	NA
LOWER (LEL):	NA
FLAMMABLE LIMITS IN AIR (%):	NA
UPPER (UEL):	NA
EXTINGUISHING MEDIA:	Use water, foam, or dry powder as appropriate.
AUTO-IGNITION:	NA

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products (See section 2).

SPECIAL FIRE OR EXPLOSION HAZARDS: DO NOT RECHARGE. As a typical sealed battery they may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.

6. Accidental Release Measures

TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

REPORTING PROCEDURE: Report all spills in accordance with Federal, State and Local reporting requirements.

7. HANDLING AND STORAGE

Store batteries in a dry place. Storing unpackaged cells together with other combustible materials could result in cell shorting and heat build-up. Do not recharge. Do not puncture or abuse.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE):		NA
VENTILATION:	Local Exhaust:	NA
	Mechanical (General):	NA
	Special:	NA
	Other:	NA
PROTECTIVE GLOVES:		NA
EYE PROTECTION:		NA
OTHER PROTECTIVE CLOTHING:		NA

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point @ 760 mm Hg (°C):	NA	Percent Volatile by Volume (%):	NA
Vapor Pressure (mm Hg @ 25°C):	NA	Evaporation Rate (Butyl Acetate = 1):	NA
Vapor Density (Air = 1):	NA	Physical State:	NA
Density (grams/cc):	NA	Solubility in Water (% by Weight):	NA
pH:	NA	Appearance and Odor:	Geometric solid object

10. STABILITY AND REACTIVITY

STABLE OR UNSTABLE:	Stable
INCOMPATIBILITY (MATERIALS TO AVOID):	NA
HAZARDOUS DECOMPOSITION PRODUCTS:	NA
DECOMPOSITION TEMPERATURE (0°F):	NA
HAZARDOUS POLYMERIZATION:	Will Not Occur
CONDITIONS TO AVOID:	Avoid electrical shorting, puncturing or deforming

11. TOXICOLOGICAL INFORMATION

INGREDIENT NAME	CAS #	%	TLV*/**TWA
Manganese Dioxide	1313-13-9	32-38	C5.0 mg/m^3
Steel	7439-89-6	19-23	---
Zinc	7440-66-6	11-16	5 mg/m^3 (as ZnO Fume)
Potassium Hydroxide	1310-58-3	5-9	Solution Not Listed
Graphite	7782-42-5	3-5	15 mppcf
Barium Sulfate	7727-43-7	<5	15 mg/m^3
Water, paper, plastic, other	---	Balance	---

**Source: OSHA 29 CFR 1910.1000 Table Z-1, 2 or 3 11-01-2012*

12. Ecological Information

Consumers should dispose of discharged batteries through waste disposal services or legitimate collection outlets. Those collecting batteries should follow state and federal regulations. Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

13. Disposal Considerations

Always comply with Federal, state or local requirements. All Rayovac Alkaline batteries have been tested per Federal hazardous waste testing requirements (TCLP). The TCLP tests show Rayovac alkaline batteries are not hazardous waste.
http://www.nema.org/Policy/Environmental-Stewardship/Documents/Companies%20Claiming%20to%20Recycle.MARCH2005.pdf

14. Transportation Information

TRANSPORTATION-SHIPPING: Alkaline Batteries are considered dry-cell batteries and they are non-dangerous goods for transportation. These batteries must be packed in a way to prevent short circuits or generation of a dangerous quantity of heat.
USDOT – See Special Provision 130.
IMO/Ocean – Not Listed.
ICAO/IATA – See Special Provision A123. This special provision also states to put the words “not restricted” and “special provision A123” on the air waybill when an air waybill is issued.

15. Regulatory Information

SARA 313: Notification is not required because these products are article(s) that do not release a covered toxic chemical under the normal conditions of storage, use, or handling.

16. Other Information

The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Spectrum Brands Inc. (Rayovac) makes no warranty expressed or implied.

SECTION 1: Product and Company Identification

Product Name: NEW RAPID TAP
Recommended Use: Multi-purpose metal cutting oil

Manufacturer Information:

Relton Corporation-Chemical Division
317 Rolyn Place
Arcadia, CA 91007-2838

Phone: (800)-423-1505
Emergency Number (24 hours):
CHEMTREC 800-424-9300

SECTION 2: Hazards Identification

GHS Classification:

Reproductive toxicity: Effects on or via lactation, H362
Hazardous to the aquatic environment, acute hazard: Category 1, H400
Hazardous to the aquatic environment, long term hazard: Category 1, H410

GHS Label Elements:

Signal Word: Warning

Hazard Statements:

H362	May cause harm to breast-fed children
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P263	Avoid contact during pregnancy and while nursing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to an appropriate waste treatment facility.

SECTION 3: Composition/Information on Ingredients

Chemical Name	CAS#	%
Mineral oil	64742-54-7	70-90
C14-C16 chlorinated paraffin	85535-85-9	<40
Calcium sulfonate	confidential	2-3

SECTION 4: First Aid Measures

General
Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effects occur. When possible bring along copy of label and SDS to health professional.

Inhalation: May cause mild respiratory tract irritation. Remove individual to fresh air. If breathing is difficult give oxygen.

Skin Contact:	Flush the affected area with water for 15 minutes minimum. Remove exposed or contaminated clothing and shoes. Wash contaminated clothing before reuse. Seek medical attention if irritation develops.
Eye Contact:	Remove contact lenses if present. Rinse eyes thoroughly with water for 15 minutes minimum. Seek medical attention if eye irritation develops or persists.
Ingestion:	If conscious give one cup of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.
Most important symptoms acute or delayed:	Not available
Recommendations for immediate medical care and special treatment:	Not available

SECTION 5: Fire Fighting Measures

Suitable extinguishing media:	Slightly combustible. Use carbon dioxide, extinguishing powder or foam. Avoid water spray.
Unsuitable extinguishing media:	Not available
Specific hazards arising during fire:	Combustion may generate carbon monoxide, carbon dioxide, hydrogen chloride and oxides of sulfur and calcium
Firefighting equipment:	Firefighters should wear suitable protective equipment
Firefighting instructions:	Evacuate personnel to a safe area. Firefighters should use self contained breathing equipment and protective clothing. Keep containers cool with water spray.

SECTION 6: Accidental Release Measures

Personal Precautions:	Wear appropriate protective equipment and clothing during clean up. Keep unprotected persons away.
Environmental Precautions	Do not allow product to enter sewers, surface or ground waters.
Methods and materials for containment and cleanup:	Contain and recover liquid when possible. Absorb with suitable absorbent and place in a chemical waste container for proper disposal (see Section 13, Disposal Considerations).

SECTION 7: Handling and Storage

Precautions for safe handling:	As with all chemical products, avoid contact and wash thoroughly after handling. Do not eat, drink or smoke while using this product. Use only in well-ventilated areas. Remove contaminated clothing and protective equipment before entering eating areas. Pregnant or breast-feeding women must not handle this product.
Conditions for safe storage including incompatibilites:	All personnel who handle this product should be trained in its safe handling. Store tightly closed in cool, dry, ventilated area. Keep out of direct sunlight and away from heat and incompatible materials. Avoid contact with acids, oxidizing agents, and caustics.

SECTION 8: Exposure Controls/Personal Protection

Exposure limit values

Material	CAS#	List	Type	Value
C14-C17 chlorinated paraffins	85535-85-9		No data available	
oil mists		OSHA	PEL	5 mg/m3
		ACGIH	TLV	5 mg/m3

Appropriate Engineering Controls: Provide sufficient mechanical (general/and or local exhaust) ventilation to maintain exposure below exposure guidelines, if applicable, or below levels that cause known, suspected, or adverse effects.

Personal Protective Measures

Eye/face protection: Use chemical goggles or full face shield.

Hand protection: Use chemically-resistant gloves.

Respiratory protection: Not required under normal conditions of use. If airborne concentrations exceed applicable exposure limits, use NIOSH approved respiratory protection.

Thermal hazards: Not available

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Eyewash station and safety shower should be in vicinity of work area.

SECTION 9: Physical and Chemical Properties

Appearance:	Amber colored oily liquid
Odor:	Mild petroleum
Odor threshold:	Not available
pH:	Not applicable
Solubility in water:	Insoluble
Viscosity:	Not available
Specific Gravity:	1.02
Melting point:	Not available
Freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	350F, COC
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/Lower flammability or explosive limits (%)	
Flammability limit-lower:	Not available
Flammability limit-upper:	Not available
Explosive limit-lower:	Not available
Explosive limit-upper:	Not available
Vapor pressure	<0.01 mmHg @ 20 C
Vapor density	Heavier than air
Partition coefficient (octanol:water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Decomposition temperature	Not available

SECTION 10: Stability and Reactivity

Reactivity: No reactivity hazards are known.

Chemical Stability: Material is stable under normal conditions of storage and handling.

Possibility of hazardous reactions: No hazardous reactions are known under normal conditions of use.

Conditions to avoid: Keep away from heat, sparks, open flames. Protect from freezing.

Materials to avoid: Do not store with strong oxidizing agents. Keep away from heat, sparks, open flames, or all sources of ignition.

Hazardous decomposition products: May include carbon monoxide, carbon dioxide, hydrogen chloride, oxides of calcium and sulfur.

SECTION 11: Toxicological Information

Acute Toxicity:
C14-C17 chlorinated paraffins: data not available

Petroleum distillates, hydrotreated heavy paraffinic
Ingestion LD50, rat, >5000 mg/kg
Dermal LD50, rabbit, 5000 mg/kg (Category 5)
Inhalation LD50, mg/L/4hr, not available

Skin: Not expected to be a primary skin irritant. Prolonged or repeated contact may cause irritation.

Eyes: Not expected to cause eye irritation.

Inhalation: May cause mild irritation of the respiratory tract with prolonged exposure.

Ingestion: Ingestion may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.

Delayed and immediate effects of exposure: Not available.

Carcinogenicity:

IARC: No ingredient is considered to be carcinogenic.

NTP: No ingredient is considered to be carcinogenic.

SECTION 12: Ecological Information

Ecotoxicity: Contains a substance which causes risk of hazardous effects to the environment. Chloroalkanes C14-C17: LC 50 (Onchorhynchus mykiss): >0.1 mg/L, 96h.

Bioaccumulation potential: Not available.

Mobility: Not available.

Other adverse effects: This material is expected to have adverse effects on marine and plant life. Spills may contaminate drinking water.

SECTION 13: Disposal Considerations

Disposal instructions: Waste disposal must be in accordance with appropriate US Federal, State and Local regulations.

Disposal of contaminated containers or packaging: Dispose of as unused product.

SECTION 14: Transportation Information

UN Number: 3082
UN proper shipping name: Environmentally hazardous substances, liquid, N.O.S, (Alkanes, C14-C17, chloro)
Transport hazard class: 9
Packing group: III
Marine pollutant: Yes

SECTION 15: Regulatory Information

Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from reporting requirements.

SARA 302 Extremely Hazardous Substances: No

SARA 311/312 Classification:

Immediate hazard	Yes
Delayed hazard	Yes
Fire hazard	No
Reactive hazard	No
Pressure hazard	No

SARA 313 Components: No

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm

HMIS Information:

Health	1
Flammability	1
Reactivity	0
Personal Protection	C

SECTION 16: Other Information

Issue date: March 30, 2015
Revision date: New issue
Version: 1.0

Prepared by: Dr. William M. Fruscella, Consulting Chemist

Disclaimer: Relton Corporation products are manufactured for professional and industrial use only. Relton Corporation believes the information contained herein is valid and accurate and makes no representation or warranty, express or implied, including the warranties of merchantablility and fitness, for a particular purpose with respect to the information contained herein.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: PRO LSPR 6PK MARK FLUORESCENT ORANGE

Revision Date: 5/12/2017

Product Identifier: 2554838

Supercedes Date: 6/5/2015

Product Use/Class: Marking Paint/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Carcinogenicity, category 2	H351	Suspected of causing cancer.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.

P501 Dispose of contents/container in accordance with local, regional and national regulations.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Propane	74-98-6	10-25	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
n-Butane	106-97-8	2.5-10	GHS04	H280
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Barium Sulfate	7727-43-7	2.5-10	Not Available	Not Available
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Stoddard Solvent	8052-41-3	0.1-1.0	GHS08	H304-372
Pigment Orange 13	3520-72-7	0.1-1.0	Not Available	Not Available
Crystalline Silica / Quartz	14808-60-7	0.1-1.0	Not Available	Not Available

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Hydrotreated Light Distillate	64742-47-8	10.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	5 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Pigment Orange 13	3520-72-7	1.0	N.E.	N.E.	N.E.	N.E.
Crystalline Silica / Quartz	14808-60-7	1.0	0.025 mg/m3	N.E.	50 µg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.857	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
3520-72-7	Pigment Orange 13	>5000 mg/kg Rat	N.I.	N.I.
14808-60-7	Crystalline Silica / Quartz	5500 mg/kg Rat	5500	100 mg/L

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 551

SDS REVISION DATE: 5/12/2017

REASON FOR REVISION:
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
05 - Fire-fighting Measures
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
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1. Identification

Product Name:	PRO LSPR 6PK WB MARK SAFETY RED	**Revision Date:**	5/18/2017
Product Identifier:	2564838	**Supercedes Date:**	6/16/2015
Product Use/Class:	Marking Paint/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P314	Get medical advice/attention if you feel unwell.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Propane	74-98-6	10-25	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10-25	GHS08	H304
n-Butane	106-97-8	2.5-10	GHS04	H280
n-Butyl Acetate	123-86-4	2.5-10	GHS02-GHS07	H226-336
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Talc (Hydrous Magnesium Silicate)	14807-96-6	2.5-10	Not Available	Not Available
Titanium Dioxide	13463-67-7	1.0-2.5	Not Available	Not Available
Iron Oxide	1309-37-1	1.0-2.5	Not Available	Not Available
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Crystalline Silica / Quartz	14808-60-7	0.1-1.0	Not Available	Not Available

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	15.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	50 ppm	150 ppm	150 ppm	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Talc (Hydrous Magnesium Silicate)	14807-96-6	5.0	2 mg/m3	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Iron Oxide	1309-37-1	5.0	5 mg/m3	N.E.	10 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Crystalline Silica / Quartz	14808-60-7	1.0	0.025 mg/m3	N.E.	50 µg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.864	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
14807-96-6	Talc (Hydrous Magnesium Silicate)	6000	N.I.	30
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	2500 mg/kg	N.I.
1309-37-1	Iron Oxide	>10000 mg/kg Rat	N.I.	N.I.
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
14808-60-7	Crystalline Silica / Quartz	5500 mg/kg Rat	5500	100 mg/L

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 567

SDS REVISION DATE: 5/18/2017

REASON FOR REVISION: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
05 - Fire-fighting Measures
09 - Physical & Chemical Properties
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: PRO LSPR 6PK WB MARK WHITE

Revision Date: 5/18/2017

Product Identifier: 2592838

Supercedes Date: 4/28/2016

Product Use/Class: Marking Paint/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Liquid, category 1	H224	Extremely flammable liquid and vapour.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378	In case of fire: Use alcohol film forming foam, carbon dioxide, dry chemical, dry sand to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P201	Obtain special instructions before use.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P314	Get medical advice/attention if you feel unwell.

GHS SDS PRECAUTIONARY STATEMENTS

P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Propane	74-98-6	10-25	GHS04	H280
Titanium Dioxide	13463-67-7	2.5-10	Not Available	Not Available
n-Butane	106-97-8	2.5-10	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Talc (Hydrous Magnesium Silicate)	14807-96-6	1.0-2.5	Not Available	Not Available
n-Butyl Acetate	123-86-4	1.0-2.5	GHS02-GHS07	H226-336
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Talc (Hydrous Magnesium Silicate)	14807-96-6	5.0	2 mg/m3	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	5.0	50 ppm	150 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Liquid	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.882	**pH:**	NE
Freeze Point, °C:	ND	**Viscosity:**	N.D.
Solubility in Water:	No Information	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	No Information	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	2500 mg/kg	N.I.
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
14807-96-6	Talc (Hydrous Magnesium Silicate)	6000	N.I.	30
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	No Information	**Flammability:**	4	**Physical Hazard:**	No Information	**Personal Protection:**	No Information

NFPA RATINGS

Health:	N.E.	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 531

SDS REVISION DATE: 5/18/2017

REASON FOR REVISION:
Regulatory Formula Source Changed
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
05 - Fire-fighting Measures
09 - Physical & Chemical Properties
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name:	PRO LSPR 6PK MARK HI-VISIBILITY YELLOW	**Revision Date:**	5/18/2017
Product Identifier:	2544838	**Supercedes Date:**	1/28/2015
Product Use/Class:	Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
26% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Carcinogenicity, category 2	H351	Suspected of causing cancer.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local, regional and national regulations.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P314	Get medical advice/attention if you feel unwell.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Propane	74-98-6	10-25	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10-25	GHS08	H304
n-Butane	106-97-8	2.5-10	GHS04	H280
n-Butyl Acetate	123-86-4	2.5-10	GHS02-GHS07	H226-336
Titanium Dioxide	13463-67-7	2.5-10	Not Available	Not Available
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Talc (Hydrous Magnesium Silicate)	14807-96-6	2.5-10	Not Available	Not Available
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Crystalline Silica / Quartz	14808-60-7	0.1-1.0	Not Available	Not Available

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	15.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	50 ppm	150 ppm	150 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Talc (Hydrous Magnesium Silicate)	14807-96-6	5.0	2 mg/m3	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Crystalline Silica / Quartz	14808-60-7	1.0	0.025 mg/m3	N.E.	50 µg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.868	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
13463-67-7	Titanium Dioxide	>10000 mg/kg Rat	2500 mg/kg	N.I.
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
14807-96-6	Talc (Hydrous Magnesium Silicate)	6000	N.I.	30
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
14808-60-7	Crystalline Silica / Quartz	5500 mg/kg Rat	5500	100 mg/L

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 569

SDS REVISION DATE: 5/18/2017

REASON FOR REVISION: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
01 - Identification
02 - Hazard Identification
05 - Fire-fighting Measures
09 - Physical & Chemical Properties
15 - Regulatory Information
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

WINDEX® COMMERCIAL LINE GLASS CLEANER WITH AMMONIA-D®

Version *1*.2 Print Date 01/11/2018

Revision Date 03/14/2016 SDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **WINDEX® COMMERCIAL LINE GLASS CLEANER WITH AMMONIA-D®**

Recommended use : Hard Surface Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification
This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements
Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact	:	No special requirements
Skin contact	:	No special requirements
Inhalation	:	No special requirements.
Ingestion	:	No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Container may melt and leak in heat of fire.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wash thoroughly after handling.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods and materials for containment and cleaning up	:	Dike large spills. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Avoid contact with skin, eyes and clothing. For personal protection see section 8. KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers	:	Keep container closed when not in use.
Other data	:	Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection	:	No special requirements.
Hand protection	:	No special requirements.
Eye protection	:	No special requirements.
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	blue
Odor	:	floral
Odour Threshold	:	Test not applicable for this product type
pH	:	10.7

WINDEX® COMMERCIAL LINE GLASS CLEANER WITH AMMONIA-D®

at (25 C)

Melting point/freezing point	:	0 C
Initial boiling point and boiling range	:	100 C
Flash point	:	does not flash
Evaporation rate	:	Test not applicable for this product type
Flammability (solid, gas)	:	Does not sustain combustion.
Upper/lower flammability or explosive limits	:	Test not applicable for this product type
Vapour pressure	:	Calculated31.7 hPa
Vapour density	:	Test not applicable for this product type
Relative density	:	1.00 g/cm3 at 25 C
Solubility(ies)	:	soluble
Partition coefficient: n-octanol/water	:	Test not applicable for this product type
Auto-ignition temperature	:	Test not applicable for this product type
Decomposition temperature	:	Heating can release hazardous gases.
Viscosity, dynamic	:	similar to water

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Viscosity, kinematic	:	similar to water
Oxidizing properties	:	Test not applicable for this product type
Volatile Organic Compounds Total VOC (wt. %)*	:	0.2 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified :

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.
Acute oral toxicity	:	LD50 > 5000 mg/kg
Acute inhalation toxicity	:	LC50 > 10 mg/L

Acute dermal toxicity : LD50 > 5000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport
Not classified as dangerous in the meaning of transport regulations.

Sea transport
Not classified as dangerous in the meaning of transport regulations.

Air transport
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from

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listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	0
Reactivity	0

NFPA Ratings

Health	1
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

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This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

Version *1*.1 Print Date 04/03/2015

Revision Date 02/25/2015 SDS Number 350000011604

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER**

Recommended use : Hard Surface Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification
This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements
Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact	:	No special requirements
Skin contact	:	No special requirements
Inhalation	:	No special requirements.
Ingestion	:	No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during firefighting	:	Container may melt and leak in heat of fire.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wash thoroughly after handling.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods and materials for containment and cleaning up	:	Dike large spills. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Avoid contact with skin, eyes and clothing. For personal protection see section 8. KEEP OUT OF REACH OF CHILDREN AND PETS.

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Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : blue transparent

Odor : pleasant

Odour Threshold : No data available

pH : 10.8

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	> 95 °C > 203 °F Method: Tag Closed Cup (TCC)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	The product is not flammable.
Upper/lower flammability or explosive limits	:	No data available
Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	1 g/cm3 at 25 °C
Solubility(ies)	:	completely soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

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Revision Date 02/25/2015 SDS Number 350000011604

Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	0 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified :

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.
Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg
Acute inhalation toxicity	:	LC50

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

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estimated
> 2.58 mg/l

Acute dermal toxicity : LD50
estimated
> 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport
Not classified as dangerous in the meaning of transport regulations.

Sea transport
Not classified as dangerous in the meaning of transport regulations.

Air transport
Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

Version *1*.1 Print Date 04/03/2015

Revision Date 02/25/2015 SDS Number 350000011604

Notification status	:	All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	1
Reactivity	0

NFPA Ratings

Health	1
Fire	1
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

WINDEX® ADVANCED GLASS & MULTI SURFACE CLEANER

Version *1*.1 Print Date 04/03/2015

Revision Date 02/25/2015 SDS Number 350000011604

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

SAFETY DATA SHEET

Issuing Date 9-April-2015 **Revision Date** 31-Aug-2015 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS Product Identifier
Product Name: **SealBest Blacktop Crack Filler**

Other Means of Identification
Product Code(s): **H5550**

Synonyms None

Recommended Use of the Chemical and Restrictions on Use
Recommended Use: No Information Available

Uses Advised Against: No Information Available

Manufacturer's Details
Manufacturer Address
ThorWorks Industries, Inc.
2520 S. Campbell St.
Sandusky, OH 44870
www.sealbest.com
1-800-326-1994

Emergency Telephone Number
Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

GHS Label Elements, Including Precautionary Statements

Emergency Overview

Signal Word **Warning**

- Harmful if swallowed
- May cause skin irritation

Appearance: Black **Physical State:** Liquid **Odor:** Asphaltic

Precautionary Statements

Prevention	None
General Advice	None
Storage	None
Disposal	None

Hazard Not Otherwise Classified (HNOC)
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %	Trade Secret
Asphalt	8052-42-4	40-60	*
Kaolin	1332-58-7	10-20	*
Polymer Blend	Proprietary	0-15	*

**The exact percentage of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of Necessary First-Aid Measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions, see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most Important Symptoms/Effects, Acute and Delayed

Most Important Symptoms/Effects No information available

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician Treat Symptomatically. May cause sensitization by skin contact.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon Dioxide (CO_2). Dry Chemical. Foam. Water Fog.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure- demand MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Personal Precautions: Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental Precautions

Environmental Precautions: See Section 12 for additional Ecological Information

Methods and Materials for Containment and Cleaning Up

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up: Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Wear personal protective equipment. Avoid breathing vapors or mists. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities

Storage: Keep container tightly closed

Incompatible Products: Strong oxidizing agents. Acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Asphalt 8052-42-4	TWA: 0.5 mg/m³ benzene soluble aerosol fume, inhalable fraction	-	Ceiling: 5 mg/m³ fume 15 min.
Kaolin 1332-58-7	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA 5 mg/m³ respirable fraction	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable dust

Appropriate Engineering Controls

Engineering Measures: Showers
Eyewash Stations
Ventilation Systems

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: If splashes are likely to occur, wear: Safety glasses with side shields.

Skin and Body Protection: Impervious gloves.

Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Liquid
Appearance: Black
Odor: Asphaltic
Odor Threshold: No Information Available

Property	Values	Remarks/Method
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	100° C	None known
Flash Point	No data available	None known
Evaporation Rate	1.8	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	<1	None known
Specific Density	1.15 @ 77 F	None known

Property	Values	Remarks/Method
Water Solubility	Easily dispersible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
Flammable Properties	Not Flammable	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other Information
VOC Content Less than 15 g/L

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: None under normal processing.
Hazardous Polymerization: Hazardous polymerization does not occur.
Conditions to Avoid: None known
Incompatible Materials: Strong oxidizing agents. Acids.
Hazardous Decomposition Products: Carbon Monoxide (CO), Carbon Dioxide (CO^2), Hydrogen Sulfide, Nitrogen Dioxide

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Product Information
Inhalation: May cause irritation of respiratory tract.
Eye Contact: Contact with eyes may cause irritation.
Skin Contact: May cause irritation.
Ingestion: Ingestion may cause stomach discomfort.

Chemical Name	LD50 Oral	LD50 Dermal	LD50 Inhalation
Asphalt	5000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	-

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics
Symptoms: No information available.

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure
Sensitization: No information available.
Mutagenic Effects: No information available.
Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen. The IARC, NTP, and OSHA do not list asphalt as a carcinogen. In general, the oxidation of polycyclic aromatic hydrocarbons destroys their carcinogenic potential. Petroleum asphalt, shale oil asphalts, and coal tars show distinct variation in their relative carcinogenicity for experimental animals.

Chemical Name	ACGIH	IARC	NTP	OSHA
Asphalt	A3	Group 2B	Reasonably Anticipated	X

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 – Animal Carcinogen
IRAC: (International Agency for Research on Cancer)
Group 2B – Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
Reasonably Anticipated – Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)
X – Present

Reproductive Toxicity: No information available.
STOT - Single Exposure: No information available.
STOT – Repeated Exposure: No information available.
Aspiration Hazard: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

Persistence and Degradability: No information available.
Bioaccumulation

Chemical Name	Log Pow
Asphalt	6..006

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Do not re-use empty containers.

14. TRANSPORTATION INFORMATION

DOT: Not regulated

15. REGULATORY INFORMATION

International Inventories
TSCA – Complies
DSL/NDSL – Complies

Legend
TSCA – United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %	SARA 313 – Threshold Values %
Asphalt	8052-42-4	20-40	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations
California Proposition 65: This product does not contain any Proposition 65 chemicals.

U.S. State Right-To-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Asphalt	X	X	X		X
Kaolin	X	X	X		X
Carbon Black	X	X	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard:** 1	**Flammability:** 0	**Instability:** 0	**Physical and Chemical Hazards-**
HMIS	**Health Hazard:** 1	**Flammability:** 0	**Physical Hazard:** 0	**Personal Protection: X**

Revision Date: 31-Aug-2015
Revision Note: Supersedes 9-April-2015
General Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, the Korean ISHA (Notice 2009-68), the Japanese Industrial Standard JIS Z 7250: 2000, Mexican NOM018-STPS 2000, SPRING Singapore, and the Global Harmonization Standard

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

IDENTIFICATION OF THE MIXTURE

TRADE/MATERIAL NAME: **SpecSeal® Firestop Putty (SSP 100, SSP28, SSP9S pads)**

RELEVANT USE of the SUBSTANCE: Firestop and Sound Transmission

USES ADVISED AGAINST: none

SUPPLIER/MANUFACTURER'S NAME: **Specified Technologies, Inc.**

Address: 210 Evans Way,
Somerville, New Jersey 08876

Business Phone: (908) 526-8000 (8:00am to 5:00pm Eastern Standard Time)

Emergency Phone: U.S., Canada: 1-800-255-3924 (24 hrs)
International: +1-813-248-0585 (collect-24 hrs)

EMAIL of Competent Person for Information on SDS: techserv@stifirestop.com

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS [Controlled Products Regulations], Mexican NOM018-STPS 2000, SPRING Singapore, and Japanese JIS Z7250 required information is included in appropriate sections based on the U.S. ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the countries listed above.

2. HAZARD IDENTIFICATION

GLOBAL HARMONIZATION AND JAPANESE JIS Z7253 LABELING AND CLASSIFICATION: This product has been classified per UN GHS Standards under U.S., Japanese and other applicable regulations that require Global Harmonization compliance.

Classification: Carcinogenic Category 2, Germ Cell Mutagen Category 2, Acute Dermal Toxicity Category 5, Eye Irritation Category 2A, Skin Irritation Category 2, Skin Sensitization Category 1, Specific Target Organ Toxicity Repeated Exposure Category 2

Signal Word: Warning

Hazard Statements: H351: Suspected of causing cancer. H341: Suspected of causing genetic effects. H313: May be harmful in contact with skin. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe vapors/fume. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves, clothing, eye protection and face protection.

Response: P308 + P313: IF exposed or concerned: Get medical advice/attention. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P333 + P313: If skin irritation or rash occurs: Get medical advice/attention. P312: Call a POISON CENTER or doctor if you feel unwell. P362 + P364: Take off contaminated clothing and wash it before reuse. P321: Specific treatment (remove from exposure and treat symptoms).

Storage: P403 + P233 + P405: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

Hazard Symbols: GHS07, GHS08

KOREAN ISHA (Notice 2009-68) LABELING AND CLASSIFICATION: Classified in accordance with ISHA Notice 2009-68. Under ISHA, no differences in classification are applicable.

3. COMPOSITION and INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Chinese IECSC Inventory	Japanese ENCS #	Korean ECL #	Taiwan NESCI ECS	WT%	LABEL ELEMENTS GHS & Japanese JIS Z7253 Classification Korean ISHA Classification GHS Hazard Codes
Aluminum Trihydrate	21645-51-2	Listed	1-17	KE-00980	Listed	50-60%	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Eye Irritation Cat. 2A Hazard Codes: H319
Proprietary Polymer		Listed	Proprietary	Proprietary	Listed	20-30%	Classification Not Applicable

3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Chemical Name	CAS #	Chinese IECSC Inventory	Japanese ENCS #	Korean ECL #	Taiwan NESCI ECS	WT%	LABEL ELEMENTS GHS & Japanese JIS Z7253 Classification Korean ISHA Classification GHS Hazard Codes
Formaldehyde Polymer with Ammonia and Phenol	35297-54-2	Listed	Not Listed	KE-17082	Listed	10-15%	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Acute Oral Toxicity Cat. 5, Skin Sensitization Cat. 1B, STOT Re Cat. 3 Hazard Codes: H303, H317, H373
Phenol	108-95-2	Listed	3-381	KE-28209	Listed	1-3%	GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Mutagenic Cat. 2, Acute Oral Toxicity Cat. 3, Acute Dermal Toxicity Cat. 3, Acute Inhalation Toxicity Cat. 3, Skin Corrosion Cat. 1B, STOT RE Cat. 2 Hazard Codes: H341, H301 + H311 + H331, H314, H373
Sulfuric Acid Compound with Graphite	12777-87-6	Not Listed	Not Listed	KE-32585	Listed	2-5%	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Carcinogenic Cat. 2 Hazard Codes: H351i
Crystalline Silica	14808-60-7	Listed	1-548	KE-29983	Listed	Trace	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Carcinogenic Cat. 1, STOT (Inhalation-Lungs) RE Cat. 2 Hazard Statement Codes: H350, H373
Formaldehyde	50-00-0	Listed	2-482	KE-17074	Listed	Trace	GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Carcinogenic Cat. 2, Acute Oral Toxicity Cat. 3, Acute Dermal Toxicity Cat. 3, Acute Inhalation Toxicity Cat. 3, Skin Corrosion Cat. 1B, Skin Sensitization Cat. 1 Hazard Codes: H351, H301 + H311 + H331, H314, H317
Water and Other Trace Ingredients						Balance	Classification Not Applicable

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

Skin Exposure: If adverse skin effects occur, discontinue use and flush contaminated area. Seek medical attention if adverse effect occurs after flushing.

Inhalation: If fumes or vapors are inhaled, remove victim to fresh air. Seek medical attention if adverse effect continues after removal to fresh air.

Eye Exposure: If this product contaminates the eyes, rinse eyes under gently running water. Remove contact lenses if easy to do. Use sufficient force to open eyelids and then "roll" eyes while flushing. Minimum flushing is for 20 minutes. The contaminated individual must seek medical attention if any adverse effect continues after rinsing.

Ingestion: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, DO NOT INDUCE VOMITING. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If victim is convulsing, maintain an open airway and obtain immediate medical attention.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: See Section 11.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate exposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not determined.

AUTOIGNITION TEMPERATURE: Not available.

FLAMMABLE LIMITS (in air by volume, %): Not applicable.

FIRE EXTINGUISHING MEDIA: Use extinguishing materials suitable for the surrounding area.

UNSUITABLE FIRE EXTINGUISHING MEDIA: None known.

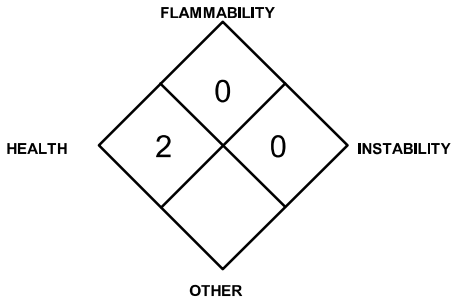
UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is formulated to be non-flammable and non-combustible. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: No Special protective actions for fire-fighters are anticipated.

NFPA RATING



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Call CHEMTREC (1-800-424-9300) for emergency assistance. Or if in Canada, call CANUTEC (613-996-6666).

PERSONAL PROTECTIVE EQUIPMENT: Proper protective equipment should be used.

Small Spills: Wear rubber gloves.

Large Spills: Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield.

6. ACCIDENTAL RELEASE MEASURES (Continued)

METHODS FOR CLEAN-UP AND CONTAINMENT: Spills of this product present minimal hazard.

Small Spills: Small releases can be carefully swept up or cleaned up using a damp sponge or polypads.

Large Spills: Access to the spill area should be restricted. For large spills, dike or otherwise contain spill and sweep-up or vacuum with non-sparking vacuum.

All Spills: Place all spill residue in a double plastic bag or other containment and seal. Close off sewers and take other measures to protect human health and the environment as necessary. Rinse area with soap and water solution and follow with a water rinse.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment.

7. HANDLING and USE

PRECAUTIONS FOR SAFE HANDLING: As with all chemicals, avoid getting this material ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or containers of this product. Avoid breathing fumes or vapors. Use in a well-ventilated location.

CONDITIONS FOR SAFE STORAGE: Store containers in a cool, dry location, away from direct sunlight, sources of intense heat.

SPECIFIC END USE(S): This product is for use as a sealant. Follow all industry standards for use of this product.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable Federal, State, and local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below (if applicable). Exhaust directly to the outside, taking necessary precautions for environmental protection.

Workplace Exposure Limits/Control Parameters:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	mg/m^3
Aluminum Trihydrate	21645-51-2	NE	NE	NE	NE	NE	NE	NE	DFG MAKs: TWA = 4 mg/m^3 (inhalable fraction); 1.5 mg/m^3 (respirable fraction) DFG MAK Pregnancy Risk Classification: D
Crystalline Silica (Quartz)	14808-60-7	0.025 (resp. fract.)	NE	30 mg/m^3 (total dust) % SO_2 + 2 0.1 (vacated 1989 PEL) 250 mppcf (resp. dust) % SiO2 + 5 or 10 mg/m^3 (resp. dust) 0.2 % SO_2 + 2		0.05 (resp. dust)	NE	50, Ca	Carcinogen: IARC-1, MAK-1 (respirable fraction), NOSH-Ca, NTP-K (respirable fraction), TLV-A2
Formaldehyde	50-00-0	SEN NIC: D-SEN, RSEN	0.37 (ceiling)	0.75 ppm See 20 CFR 1910.1048(c)	2 ppm	0.016 ppm See Pocket Guide App. A	0.1 ppm, 15 min.	20 ppm (Ca)	DFG MAKs: TWA = 0.37 PEAK = 2•MAK 15-min average value, 1-hr interval, 4 per shift; 1 (ceiling) Danger of Sensitization of the Skin DFG MAK Germ Cell Mutagen Category: 5 DFG MAK Pregnancy Risk Classification: C Carcinogen: EPA-B1, IARC-1, MAK-4, NIOSH-Ca, NTP-K, OSHA-Ca, TLV-A2
Formaldehyde Polymer with Ammonia and Phenol	35297-54-2	NE	NE	NE	NE	NE	NE	NE	NE
Phenol	108-95-2	19 (skin)	Skin	19 (skin)	Skin	19 (skin)	60 (skin) 15 min.	25 ppm	DFG MAK: Skin Carcinogen: EPA-I, EPA-D, IARC-3, MAK-3B, TLV-A4
Proprietary Polymer		NE	NE	NE	NE	NE	NE	NE	NE
Sulfuric Acid Compound with Graphite	12777-87-6	NE	NE	NE	NE	NE	NE	NE	NE

NE: Not Established. Ca: Carcinogen NIC: Notice of Intended Change DSEN: May Cause Dermal Sensitization. This notation is used to indicate the potential for dermal sensitization resulting from the interaction of an absorbed agent and ultraviolet light (i.e. photosensitization) RSEN: May Cause Respiratory Sensitization SEN: Confirmed Potential Worker Sensitization as a Result of Dermal Contact and/or Inhalation Exposure, Based on the Weight of Scientific Evidence See Section 16 for Definitions of Other Terms Used

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

International Occupational Exposure Limits: Currently, the following additional exposure limit values have been established by various countries for the components of this mixture. More current limits may be available; individual countries should be consulted to determine if newer limits are available.

ALUMINUM HYDROXIDE:
Australia: TWA = 2 mg(Al)/m^3, JUL 2008
Belgium: TWA = 2 mg(Al)/m^3, MAR 2002
Finland: TWA = 2 mg(Al)/m^3, NOV 2011
France: VME = 2 mg(Al)/m^3, FEB 2006
Korea: TWA = 2 mg(Al)/m^3, 2006
New Zealand: TWA = 2 mg(Al)/m^3, JAN 2002
Russia: TWA = 6 mg/m^3, JUN 2003
Sweden: TWA = 1 mg(Al)/m^3, JUN 2005
Switzerland: MAK-W = 3 mg/m^3, resp, JAN 2011
United Kingdom: TWA = 2 mg(Al)/m^3, OCT 2007
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

CRYSTALLINE SILICA:
Australia: TWA = 0.1 mg/m^3, JUL 2008
Belgium: TWA = 0.1 mg/m^3 (resp. dust), MAR 2002
Denmark: TWA = 0.1 mg/m^3 (respirable), carc, MAY 2011
Denmark: TWA = 0.1 mg/m^3 (resp.), carc, MAY2011
Denmark: TWA = 0.3 mg/m^3 (total), MAY 2011
Finland: TWA = 0.05 mg/m^3, resp. dust, SEP 2009
France: VME = 0.1 mg/m^3, (resp), FEB 2006
Iceland: TWA = 0.1 mg/m^3 (resp. dust), NOV 2011
Japan: OEL-C = 0.03 mg/m^3 (respirable), APR 2007
Korea: TWA = 0.1 mg/m^3, 2006
Mexico: TWA = 0.1 mg/m^3 (respirable), 2004
The Netherlands: MAC-TGG = 0.075 mg/m^3, 2003
New Zealand: TWA = 0.2 mg/m^3 (respirable dust), JAN 2002
Norway: TWA = 0.1 mg/m^3 (resp. dust), JAN 1999
Norway: TWA = 0.3 mg/m^3 (total dust), JAN 1999
Peru: TWA = 0.05 mg/m^3, JUL 2005
Russia: TWA = 1 mg/m^3, STEL = 3 mg/m^3, JUN 2003
Sweden: TWA = 0.1 mg/m^3 (resp. dust), JUN 2005
Switzerland: MAK-W = 0.15 mg/m^3, DEC 2006
Thailand: TWA = 10 mg/m^3 (resp. dust), JAN 1993
Thailand: TWA = 30 mg/m^3 (total dust), JAN 1993
United Kingdom: TWA = 0.1 mg/m^3 (resp. dust), OCT 2007
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

FORMALDEHYDE:
ARAB Republic of Egypt: TWA = 2 ppm (3 mg/m^3), JAN 1993
Australia: TWA = 1 ppm (1.2 mg/m^3), STEL = 2 ppm (2.5 mg/m^3), Carcinogen, JUL 2008
Austria: MAK-TMW = 0.5 ppm (0.6 mg/m^3); KZW = 0.5 ppm (0.6 mg/m^3), skin, sen, 2007
Belgium: STEL = 0.3 ppm (0.38 mg/m^3), MAR 2002
Denmark: CL = 0.3 ppm (0.4 mg/m^3), carc, MAY 2011
Finland: TWA = 0.3 ppm (0.37 mg/m^3), CL = 1 ppm (1.2 mg/m^3), NOV 2011
France: VME = 0.5 ppm, VLE 1 ppm, C3 Carcinogen, FEB 2006
Germany: MAK = 0.3 ppm (0.37 mg/m^3), 2011
Hungary: TWA = 0.6 mg/m^3, STEL 0.6 mg/m^3, Skin, SEP 2000

FORMALDEHYDE (continued):
Iceland: TWA = 0.3 ppm (0.4 mg/m^3), STEL 1 ppm (1.2 mg/m^3), Sen, NOV 2011
Japan: OEL = 0.1 ppm (0.12 mg/m^3), 2A Carc, A2 Sen, s1 Sen, MAY 2012
Japan: OEL = 0.2 ppm (0.24 mg/m^3), MAY2012
Korea: TWA = 1 ppm (1.5 mg/m^3), STEL = 2 ppm (3 mg/m^3), 2006
Mexico: PEAK = 2 ppm (3 mg/m^3), 2004
The Netherlands: MAC-TGG = 1.5 mg/m^3, 2003
New Zealand: CL = 1 ppm (1.2 mg/m^3), sen, JAN 2002
Norway: TWA = 0.5 ppm (0.6 mg/m^3), JAN 1999
Peru: TWA STEL = 0,3 ppm (0,37 mg/m^3), JUL 2005
The Philippines: TWA = 5 ppm (6 mg/m^3), JAN 1993
Poland: MAC(TWA) = 0.5 mg/m^3, MAC(STEL) = 1 mg/m^3, JAN 1999
Russia: STEL = 0.5 mg/m^3, Skin, JUN 2003
Sweden: TWA = 0.5 ppm (0.6 mg/m^3), CL = 1 ppm (1.2 mg/m^3), Carcinogen, Sen, JUN 2005
Switzerland: MAK-W = 0.3 ppm (0.37 mg/m^3), KZG-W = 0.6 ppm (0.74 mg/m^3), Carc 3, Sen, JAN 2011
Thailand: TWA = 3 ppm, STEL = 5 ppm, JAN 1993
Turkey: TWA = 5 ppm (6 mg/m^3), JAN 1993
United Kingdom: TWA = 2 ppm (2.5 mg/m^3); STEL 2 ppm (2.5 mg/m^3), OCT 2007
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

PHENOL:
ARAB Republic of Egypt: TWA = 5 ppm (19 mg/m^3), Skin, JAN 1993
Australia: TWA = 1 ppm (4 mg/m^3), JUL 2008
Austria: MAK-TMW = 2 ppm (7.8 mg/m^3), skin, 2007
Denmark: TWA = 2 ppm (7.8 mg/m^3), Skin, MAR 2002
Denmark: TWA = 1 ppm (4 mg/m^3), skin, MAY 2011
EC: TWA = 7.8 mg/m^3 (2 ppm), skin, JUN 2000
Finland: TWA = 2 ppm (8 mg/m^3), STEL = 4 ppm (16 mg/m^3), skin, NOV 2011
France: VME = 2 ppm (7.8 mg/m^3), Skin, FEB 2006
Hungary: TWA = 7.8 mg/m^3, STEL = 78 mg/m^3, Skin, SEP 2000
Iceland: TWA = 1 ppm (4 mg/m^3), skin, NOV 2011
Japan: OEL = 5 ppm (19 mg/m^3), skin, MAY 2012
Korea: TWA = 5 ppm (19 mg/m^3), skin, 2006
Mexico: TWA = 5 ppm (19 mg/m^3); STEL = 10 ppm (38 mg/m^3) (skin), 2004
The Netherlands: MAC-TGG = 8 mg/m^3, Skin, 2003
New Zealand: TWA = 5 ppm (19 mg/m^3), skin, JAN 2002
Norway: TWA = 1 ppm (4 mg/m^3), JAN 1999
Peru: TWA = 5 ppm (19 mg/m^3), JUL 2005
The Philippines: TWA = 5 ppm (10 mg/m^3), Skin, JAN 1993
Poland: MAC(TWA) = 10 mg/m^3, MAC(STEL) = 20 mg/m^3, JAN 1999
Russia: TWA = 0.3 mg/m^3, STEL = 1 mg/m^3, Skin, JUN 2003
Sweden: TWA = 1 ppm (4 mg/m^3); STEL = 2 ppm (8 mg/m^3), Skin, JUN 2005
Switzerland: CL 5 ppm (19 mg/m^3), skin, JAN 2011
Thailand: TWA = 5 ppm (19 mg/m^3), JAN 1993
Turkey: TWA = 5 ppm (19 mg/m^3), Skin, JAN 1993
United Kingdom: TWA = 2 ppm (7.8 mg/m^3), skin, OCT2007
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

PROTECTIVE EQUIPMENT: *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including* U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hard Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR1910.132*), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02,* Z94.3-M1982, *Industrial Eye and Face Protectors and* CSA Standard Z195-02, *Protective Footwear),* or standards of Japan (including JIS T 8116:2005 for glove selection, JIS T 8150:2006 for respiratory PPE, JIS T 8147:2003 for eye protectors, and JIS T 8030:2005 for protective clothing). Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations.

Eye Protection: Wear splash goggles or safety glasses as appropriate for the task.

Hand Protection: During manufacture or other similar operations, wear the appropriate hand protection for the process.

Skin Protection: Use appropriate protective clothing. If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. Full-body chemical protective clothing is recommended for emergency response procedures.

9. PHYSICAL and CHEMICAL PROPERTIES

FORM: Putty
MOLECULAR FORMULA: Mixture.
ODOR: Minimal.
FLAMMABLE LIMITS (in air by volume, %): Not applicable.
DECOMPOSITION TEMPERATURE: Not available.
AUTOIGNITION TEMPERATURE: Not available.
FREEZING/MELTING POINT: Not available.

COLOR: Red.
MOLECULAR WEIGHT: Mixture.
ODOR THRESHOLD: Not available.
OXIDIZING PROPERTIES: Not applicable.
PERCENT VOLATILE: Not available.
FLASH POINT: Not available.
BOILING POINT: Not available.

9. PHYSICAL and CHEMICAL PROPERTIES (Continued)

VAPOR PRESSURE: Not available.
VAPOR DENSITY (air = 1): Not available.
EVAPORATION RATE (*n*-BuAc = 1): Not Applicable
SOLUBILITY IN WATER: Insoluble.
COEFFICIENT WATER/OIL DISTRIBUTION: Not established.
SPECIFIC GRAVITY (water = 1): 1.49
CARB VOC: Not available.
SCAQMD (U.S. EPA Method 24): Not available.
SOLUBILITY IN SOLVENTS: Not available.
pH: Not available.
HOW TO DETECT THIS SUBSTANCE (warning properties in event of accidental release): The appearance may be characteristics to distinguish a release of this product.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: This product is stable when properly stored at normal temperature and pressures (see Section 7, Handling and Storage).
DECOMPOSITION PRODUCTS: Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases Hydrolysis: None known.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is incompatible with strong oxidizers.
POSSIBILITY OF HAZARDOUS POLYMERIZATION OR REACTION: Will not occur.
CONDITIONS TO AVOID: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE: The health hazard information provided below is pertinent to employees using this product in an occupational setting. The following paragraphs describe the symptoms of exposure by route of exposure.

Inhalation: Inhalation of fumes or vapors if heated may cause irritation of the nose, throat, and lungs and cause coughing. Removal to fresh air should relieve symptoms. The trace Crystalline Silica and Formaldehyde components are known human carcinogens. Due to the form of this product, this hazard is not as significant due to viscosity and consistency of the mixture.

Contact with Skin or Eyes: Direct eye contact may cause irritation, redness, and tearing from mechanical irritation. Prolonged or repeated skin exposures may cause dermatitis (dry red skin).

Skin Absorption: The Phenol component and trace Formaldehyde component can be absorbed through intact skin. Phenol in all forms (solid, solutions and vapor) is readily absorbed through the skin and can cause harmful effects if a large area of the skin is involved or if contact is prolonged. Due to the small amount of each of these materials, the possibility of adverse effects is not expected to be significant however, skin contact should be avoided. Formaldehyde and Phenol can cause sensitization effects as described under 'Sensitization Effect's'.

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE (continued):

Ingestion: Ingestion is not a significant route of occupational exposure and is unlikely to occur. If this product is swallowed, irritation of the mouth, throat, esophagus and other tissues of the digestive system may occur. Symptoms of ingestion may include nausea, vomiting, and diarrhea.

Injection: Accidental injection of this product, via laceration or puncture by a contaminated object can cause redness at the site of injection.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: Exposure to this product may cause the following health effects:

Acute: Inhalation of fumes or vapors may cause irritation of respiratory system. Eye contact may cause mechanical irritation. Eye contact with fumes can cause irritation. May be harmful if swallowed.

Chronic: Prolonged or repeated skin exposure may cause dermatitis (dry red skin).

TARGET ORGANS: Acute: Skin, eyes, respiratory system. Chronic: Skin.

TOXICITY DATA: Currently, the following toxicological data are available for components of 1% or more concentration.

ALUMINUM TRIHYDRATE:

TDLo (Oral-Child) 79 gm/kg/2 years-intermittent: Behavioral: changes in motor activity (specific assay), muscle contraction or spasticity; Musculoskeletal: osteomalacia

TDLo (Oral-Child) 122 gm/kg/4 days: Gastrointestinal: other changes; Nutritional and Gross Metabolic: body temperature increase

TDLo (Oral-Woman) 84 gm/kg: female 1-40 week(s) after conception: Reproductive: Effects on Newborn: physical

TDLo (Oral-Infant) 68040 mg/kg/24 weeks-intermittent: Musculoskeletal: osteoporosis; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in phosphorus

TDLo (Oral-Woman) 73912.5 mg/kg/26 weeks-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Musculoskeletal: osteoporosis; Nutritional and Gross: Metabolic: changes in phosphorus

TDLo (Unreported-Infant) 39 gm/kg/24 days-intermittent: Musculoskeletal: osteomalacia

TDLo (Oral-Rat) 15 mg/kg: Gastrointestinal: other changes

TDLo (Oral-Rat) 8040 mg/kg/67 days-continuous: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Nutritional and Gross Metabolic: changes in phosphorus

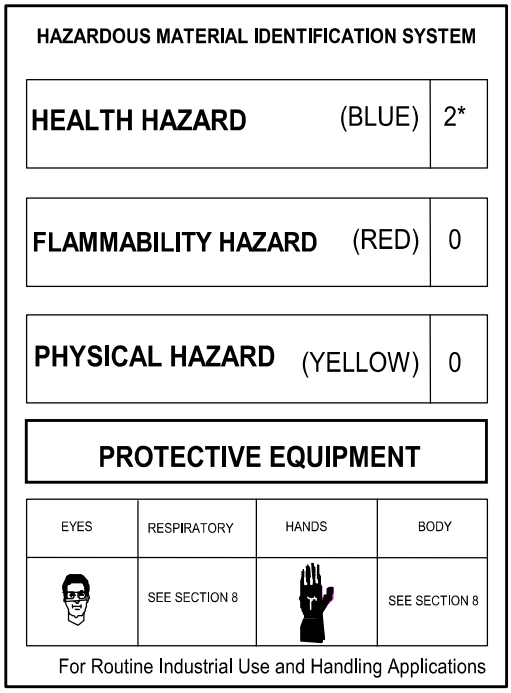
TDLo (Oral-Mouse) 80,880 mg/kg/23 weeks-continuous: Liver: other changes; Musculoskeletal: other changes; Nutritional and Gross Metabolic: changes in metals, not otherwise specified

TDLo (Intraperitoneal-Rat) 150 mg/kg

TDLo (Intraperitoneal-Rat) 6240 mg/kg/26 weeks-intermittent: Blood: pigmented or nucleated red blood cells; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in iron

TDLo (Intraperitoneal-Rat) 1920 mg/kg/8 weeks-intermittent: Blood: microcytosis with or without anemia

TDLo (Intraperitoneal-Rat) 960 mg/kg/4 weeks-intermittent: Blood: changes in erythrocyte (RBC) count



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe * = Chronic hazard

TOXICITY DATA (continued):

ALUMINUM TRIHYDRATE:

TDLo (Oral-Child) 79 gm/kg/2 years-intermittent: Behavioral: changes in motor activity (specific assay), muscle contraction or spasticity; Musculoskeletal: osteomalacia

TDLo (Oral-Child) 122 gm/kg/4 days: Gastrointestinal: other changes; Nutritional and Gross Metabolic: body temperature increase

TDLo (Oral-Woman) 84 gm/kg: female 1-40 week(s) after conception: Reproductive: Effects on Newborn: physical

TDLo (Oral-Infant) 68040 mg/kg/24 weeks-intermittent: Musculoskeletal: osteoporosis; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in phosphorus

TDLo (Oral-Woman) 73912.5 mg/kg/26 weeks-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Musculoskeletal: osteoporosis; Nutritional and Gross: Metabolic: changes in phosphorus

TDLo (Unreported-Infant) 39 gm/kg/24 days-intermittent: Musculoskeletal: osteomalacia

TDLo (Oral-Rat) 15 mg/kg: Gastrointestinal: other changes

TDLo (Oral-Rat) 8040 mg/kg/67 days-continuous: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Nutritional and Gross Metabolic: changes in phosphorus

TDLo (Oral-Mouse) 80,880 mg/kg/23 weeks-continuous: Liver: other changes; Musculoskeletal: other changes; Nutritional and Gross Metabolic: changes in metals, not otherwise specified

TDLo (Intraperitoneal-Rat) 150 mg/kg

TDLo (Intraperitoneal-Rat) 6240 mg/kg/26 weeks-intermittent: Blood: pigmented or nucleated red blood cells; Nutritional and Gross Metabolic: weight loss or decreased weight gain, changes in iron

TDLo (Intraperitoneal-Rat) 1920 mg/kg/8 weeks-intermittent: Blood: microcytosis with or without anemia

TDLo (Intraperitoneal-Rat) 960 mg/kg/4 weeks-intermittent: Blood: changes in erythrocyte (RBC) count

PHENOL:

LDLo (Oral-Human) 14 gm/kg: Behavioral: muscle weakness; Lungs, Thorax, or Respiration: cyanosis

LDLo (Oral-Human) 140 mg/kg: Behavioral: hallucinations, distorted perceptions; Skin and Appendages: sweating

LDLo (Oral-Infant) 10 mg/kg: Behavioral: muscle weakness; Lungs, Thorax, or Respiration: cyanosis

TDLo (Parenteral-Man) 105.3 mg/kg: Peripheral Nerve and Sensation: sensory change involving peripheral nerve; Lungs, Thorax, or Respiration: dyspnea; Kidney/Ureter/Bladder: renal function tests depressed

TDLo (Unreported-Man) 5714 µg/kg: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified

IC_{50} (*In vitro*-Human Liver) 3.02 mmol/L/24 hours: In Vitro Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{50} (*In vitro*-Human Liver) 9.67 mmol/L/24 hours: In Vitro Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{50} (*In vitro*-Human Liver Tumor) 10 mmol/L/24 hours: *In Vitro* Toxicity Studies: cell protein synthesis

IC_{50} (*In vitro*-Human Liver Tumor) 3.47 mmol/L/24 hours: In Vitro Toxicity Studies: cell membrane integrity: cytoplasmic enzymes leakage (lactate dehydrogenase, ATP enzymes etc.), cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{50} (*In vitro*-Human Liver Tumor) 14.66 mmol/L/24 hours: In Vitro Toxicity Studies: cell membrane integrity: cytoplasmic enzymes leakage (lactate dehydrogenase, ATP enzymes etc.), cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{50} (*In vitro*-Human HeLa Cell) 100 mg/L/24 hours: *In Vitro* Toxicity Studies: cell membrane integrity: cytoplasmic enzymes leakage (lactate dehydrogenase, ATP enzymes etc.)

Open Irritation Test (Skin-Rabbit) 535 mg: Severe

Standard Draize Test (Skin-Rabbit) 100 mg: Mild

Standard Draize Test (Eye-Rabbit) 5 mg: Severe

Standard Draize Test (Eye-Rabbit) 400 µL/30 seconds: Severe

Rinsed with Water (Eye-Rabbit) 5 mg/30 seconds: Mild

LC_{50} (Inhalation-Rat) 316 mg/m^3

LC_{50} (Inhalation-Rat) 316 mg/m^3/4 hours

LC_{50} (Inhalation-Mouse) 177 mg/m^3

LC_{50} (Inhalation-Mouse) 177 mg/m^3/4 hours

LD_{50} (Oral-Rat) 317 mg/kg: Behavioral: convulsions or effect on seizure threshold

LD_{50} (Oral-Rat) 512 mg/kg

LD_{50} (Oral-Mouse) 270 mg/kg

LD_{50} (Oral-Mammal-Species Unspecified) 500 mg/kg

LD_{50} (Skin-Rat) 1500 mg/kg

LD_{50} (Skin-Rat) 669 mg/kg: Behavioral: tremor; Kidney/Ureter/Bladder: hematuria; Skin and Appendages: cutaneous sensitization, experimental (after topical exposure)

LD_{50} (Skin-Rabbit) 630 mg/kg

LD_{50} (Intraperitoneal-Rat) 127 mg/kg

LD_{50} (Intraperitoneal-Mouse) 180 mg/kg

LD_{50} (Subcutaneous-Rat) 300 mg/kg

LD_{50} (Subcutaneous-Mouse) 344 mg/kg

LD_{50} (Intravenous-Mouse) 112 mg/kg: Behavioral: tremor

IC_{10} (*In vitro*-Rat Liver) 1.12 mmol/L/24 hours: *In Vitro* Toxicity Studies: cell membrane integrity: cytoplasmic enzymes leakage (lactate dehydrogenase, ATP enzymes etc.), cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{10} (*In vitro*-Rat Lung) 0.03 gm/L/24 hours: In Vitro Toxicity Studies: cell membrane integrity (prelabeled cells): release of radioactive isotopes ([51Cr], [3H]-thymidine, [3H]-proline, [35S]- or [75Se]-methionine, 5-[125I]-2-deoxy-uridine) or fluorescent dyes (bis-carboxyethyl-carboxyfluorescein (BCECF) or calcein-AM) TIVIEQ

IC_{10} (*In vitro*-Rat Lung) 0.2 gm/L/24 hours: *In Vitro* Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{10} (*In vitro*-Chicken Neurons) 7470 µmol/L/21 hour.....*In Vitro* Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

PHENOL (continued):

IC_{10} (*In vitro*-Chicken Neurons) 1862 µmol/L/21 hours: *In Vitro* Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc

IC_{10} (*In vitro*-Chicken Neurons) 614 µmol/L/20 hours: *In Vitro* Toxicity Studies: cell viability (lysosomal damage): neutral red assay etc.

IC_{50} (*In vitro*-Rat Liver) 3.3 mmol/L/24 hours: *In Vitro* Toxicity Studies: cell membrane integrity: cytoplasmic enzymes leakage (lactate dehydrogenase, ATP enzymes etc.), cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc.

IC_{50} (*In vitro*-Rat Lung) 1 gm/L/24 hours: In Vitro Toxicity Studies: cell viability (mitochondrial reductase assays): MTT, XTT, MTS, WSTs assays etc.

IC_{50} (*In vitro*-Rat Lung) 0.36 gm/L/24 hours: In Vitro Toxicity Studies: cell membrane integrity (prelabeled cells): release of radioactive isotopes ([51Cr], [3H]-thymidine, [3H]-proline, [35S]- or [75Se]-methionine, 5-[125I]-2-deoxy-uridine) or fluorescent dyes (bis-carboxyethyl-carboxyfluorescein (BCECF) or calcein-AM)

TDLo (Oral-Mouse) 2800 mg/kg/10 days-intermittent: Behavioral: tremor, ataxia

TDLo (Skin-Mouse) 329 mg/kg/30 minutes: Skin and Appendages: primary irritation (after topical exposure); Biochemical: Metabolism (Intermediary): other, effect on inflammation or mediation of inflammation

TDLo (Skin-Mouse) 88.9 µL/kg: Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Skin-Mouse) 16 gm/kg/40 weeks-intermittent: Tumorigenic: carcinogenic by RTECS criteria; Skin and Appendages: tumors

TDLo (Intraperitoneal-Rat) 650 mg/kg/17 days-intermittent: Blood: other changes

TDLo (Intraperitoneal-Rat) 600 mg/kg: female 12-14 day(s) after conception: Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)

TDLo (Intraperitoneal-Mouse) 300 mg/kg: Nutritional and Gross Metabolic: body temperature decrease

TDLo (Intraperitoneal-Mouse) 300 mg/kg: Immunological Including Allergic: hypersensitivity delayed

TCLo (Inhalation-Rat) 110 mg/m^3/4 hours: Behavioral: somnolence (general depressed activity); Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: proteases

TCLo (Inhalation-Rat) 150 ug/m^3/8 hours/26 weeks-intermittent: Kidney/Ureter/Bladder: changes in tubules (including acute renal failure, acute tubular necrosis); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases

TCLo (Inhalation-Rat) 5 mg/m^3/4 hours/17 weeks-intermittent: Liver: liver function tests impaired; Endocrine: effect on menstrual cycle; Blood: changes in leukocyte (WBC) count

TCLo (Inhalation-Rat) 100 µg/m^3/24 hours/61 days-continuous: Behavioral: muscle contraction or spasticity; Blood: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: true cholinesterase

TCLo (Inhalation-Rat) 0.5 mg/m^3/4 hours/122 days-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: multiple enzyme effects

TCLo (Inhalation-Mouse) 15 ppm/6 minutes: Lungs, Thorax, or Respiration: respiratory depression

LCLo (Inhalation-Rat) 232 mg/m^3/ 4 hours

LCLo (Inhalation-Mouse) 110 mg/m^3/4 hours

Mutation Test Systems-Not Otherwise Specified (Human HeLa cell) 17 mg/L

Mutation Test Systems-Not Otherwise Specified (Human Lymphocyte) 5 µmol/L

DNA Inhibition (Human HeLa Cell) 1 mmol/L

Sister Chromatid Exchange (Human Lymphocyte) 5 µmol/L

Cytogenetic Analysis (Human Cells-Not Otherwise Specified) 300 µmol/L/30 hours

Mutation in Microorganisms (Bacteria-*Salmonella typhimurium*) 40 µmol/plate

Mutation in Microorganisms (Mouse Lymphocyte) 300 mg/L

Mutation in Microorganisms (Microorganism-Not Otherwise Specified) 200 mg/L/8 hours

Sex Chromosome Loss and Non-Disjunction (Insect-*Drosophila melanogaster* Ovary) 100 ppm

Gene Conversion and Mitotic Recombination (Mold-*Aspergillus nidulans*) 15 µmol/L

DNA Damage (Mammal-Species Unspecified Lymphocyte) 250 mmol/L

Micronucleus Test (Oral-Mouse) 265 mg/kg

Micronucleus Test (Intraperitoneal-Mouse) 265 mg/kg

Micronucleus Test (Hamster Lung) 4 mmol/L

Micronucleus Test (Hamster Ovary) 175 mg/L

Micronucleus Test (Hamster Embryo) 500 mg/L/4 hours

DNA Inhibition (Oral-Mouse) 20 gm/kg

DNA Inhibition (Mouse Lymphocyte) 800 µmol/L

DNA Inhibition (Hamster Lung) 1900 µmol/L

Cytogenetic Analysis (Multiple Routes-Fish-Not Otherwise Specified) 300 nL/L

Cytogenetic Analysis (Hamster Ovary) 2 gm/L

Cytogenetic Analysis (Hamster Embryo) 100 µmol/L

Unscheduled DNA Synthesis (Oral-Rat) 4 gm/kg

Unscheduled DNA Synthesis (Hamster Embryo) 3 µmol/L

DNA Damage (Mouse Lymphocyte) 1500 µmol/L

Mutation Test Systems-Not Otherwise Specified (Mouse Cells-Not Otherwise Specified) 2500 µmol/L

Mutation Test Systems-Not Otherwise Specified (Rabbit Bone Marrow) 250 µmol/L

Mutation in Mammalian Somatic Cells (Mouse Lymphocyte Mouse Lymphocyte) 1890 µmol/L

Mutation in Mammalian Somatic Cells (Hamster Embryo) 3 mmol/L

Morphological Transformation (Hamster Embryo) 10 µmol/L

Sister Chromatid Exchange (Hamster Ovary) 300 mg/L

Sister Chromatid Exchange (Hamster Embryo) 1 mmol/L

POLYBUTENE:

TCLo (Inhalation-Rat) 700 mg/m^3/7 hours/2 weeks-intermittent: Liver: changes in liver weight; Nutritional and Gross Metabolic: weight loss or decreased weight gain

11. TOXICOLOGICAL INFORMATION (Continued)

IRRITANCY OF PRODUCT: Inhalation of fumes or vapors may cause respiratory irritation. Eye contact may cause irritation. Eye contact with fumes may cause irritation. Prolonged skin contact may cause irritation.

CARCINOGENIC POTENTIAL OF COMPONENTS: Components of this product are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

CRYSTALLINE SILICA: ACGIH-TLV-A2 (Suspected Human Carcinogen); IARC-1 (Carcinogenic to Humans); MAK-1 (Substances that Cause Cancer in Man and Can Be Assumed to Make a Significant Contribution to Cancer Risk); NIOSH-Ca (Potential Occupational Carcinogen with No Further Categorization); NTP-K (Known to Be a Human Carcinogen)

FORMALDEHYDE: ACGIH-TLV-A2 (Suspected Human Carcinogen); EPA-B1 (Probable Human Carcinogen-Limited Evidence of Carcinogenicity from Epidemiological Studies), IARC-1 (Carcinogenic to Humans); MAK-4 (Substances with Carcinogenic Potential for Which Genotoxicity Plays No or at Most a Minor Role. No significant contribution to human cancer risk is expected, provided the MAK value is observed.); NIOSH-Ca (Potential Occupational Carcinogen with No Further Categorization); NTP-K (Known to Be a Human Carcinogen); OSHA-Ca (Carcinogen Defined with No Further Categorization)

PHENOL: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); EPA-I (Data are Inadequate for an Assessment of Human Carcinogenic Potential); EPA-D (Not Classifiable as to Human Carcinogenicity); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); MAK-3B (Substances for Which in vitro tests or animal studies have yielded evidence of carcinogenic effects that is not sufficient for classification of the substance in one of the other categories. Further studies are required before a final classification can be made.)

The remaining components are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore is neither considered to be nor suspected to be a cancer-causing agent by these agencies.

REPRODUCTIVE TOXICITY INFORMATION: This product is not expected or reported to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects. The following gives information on possible effects from components.

Mutagenicity: Formaldehyde is considered mutagenic, based on positive results (e.g. chromosomal aberrations in lung cells) observed in studies with live animals. In occupational exposure studies, which are limited by such problems as low numbers of workers studied and mixed exposures, both positive and negative results (micronuclei, sister chromatid exchanges (SCEs), chromosome aberrations in lymphocytes or cheek and nose cells) and a negative result (abnormal sperm) were obtained.(19,44,46,81) However, positive results (SCEs in lymphocytes, DNA-protein crosslinks in lymphocytes) were obtained in 2 reasonably well-conducted studies.

Embryotoxicity/Teratogenicity: No component is known to cause human embryotoxicity or teratogenicity. Animal studies are inconclusive or have not shown embryotoxicity or teratogenicity.

Reproductive Toxicity: There is insufficient evidence to determine if Formaldehyde causes reproductive toxicity in humans. Despite limitations, the few animal studies available do not suggest that Formaldehyde exposure will affect fertility.

ACGIH BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for this material.

DEGREE OF EFFECT TO THE HEALTH OF THE POLLUTING AGENT OF ENVIRONMENT OF WORK (per Mexican NOM-010 STPS-1999): 0

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability. The mineral components are not expected to biodegrade to great extent.

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential.

ECOTOXICITY: This product has not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

OTHER ADVERSE EFFECTS: This material is not listed as having ozone depletion potential.

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, National, International, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is not classified as dangerous goods under rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is not classified as Dangerous Goods by the International Maritime Organization.

OFFICIAL MEXICAN STANDARD; REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS AND RESIDUES: This product is not classified as Dangerous Goods, per transport regulations of Mexico.

SINGAPORE STANDARD 286: PART A: This product has no requirements under the Specification for Caution Labeling for Hazardous Substances, Part 4: Marking of Packages, Containers and Vehicles, as it does not meet the criteria for any hazard class under this regulation.

TRANSPORT IN BULK ACCORDING TO THE IBC CODE: See the information under the individual jurisdiction listings for IBC information.

ENVIRONMENTAL HAZARDS: This material does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA Reporting Requirements: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act as follows.

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Formaldehyde	Yes	Yes	Yes
Phenol	Yes	Yes	Yes

U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

U.S. SARA Threshold Planning Quantity (TPQ): Formaldehyde: 500 lb (27.2 kg); Phenol: 500 lb (27.2 kg)

U.S. CERCLA Reportable Quantity (RQ): Formaldehyde: 100 lb (45.4 kg); Phenol: 1000 lb (454 kg)

U.S. TSCA Inventory Status: Components of this product are listed on the TSCA Inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): The Crystalline Silica and Formaldehyde (gas) components are on the California Proposition 65 lists. WARNING! This product contains compounds known to the State of California to cause Cancer. This product contains trace amounts of a suspected human carcinogen by inhalation; however, this hazard is not expected to be significant due to viscosity and consistency of the mixture.

CANADIAN REGULATIONS:

Canadian DSL/NDSL Inventory Status: Components are on the DSL or NDSL Inventories.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: The Phenol and Formaldehyde components are on the CEPA Priorities Substances 2 List.

Canadian WHMIS Classification and Symbols: This product would be categorized as a Controlled Product, D2B (Other Toxic Effects-Potential Carcinogenic and Mutagenic Effect, Irritation, Skin Sensitization) as per the Controlled Product Regulations.

CHINESE REGULATIONS:

Chinese Inventory of Existing Chemical Substances Status: Components listed by CAS# are listed on the Chinese Inventory of Existing Chemical Substances (IECSC), or are not listed, per information in Section 2.

JAPANESE REGULATIONS:

Japanese ENCS: Components listed by CAS# are on the ENCS Inventory, are excepted, or are not listed, per information in Section 2.

Japanese Ministry of Economy, Trade, and Industry (METI) Status: Components are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese METI.

Poisonous and Deleterious Substances Control Law: Components are not listed as a Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

KOREAN REGULATIONS:

Korean Existing Chemicals List (ECL) Status: Components listed by CAS# are listed on the Korean ECL Inventory, or are not listed, per information in Section 2.

MEXICAN REGULATIONS:

Mexican Workplace Regulations (NOM-018-STPS-2000): This product is classified as hazardous.

SINGAPORE REGULATIONS:

List of Controlled Hazardous Substances: Components listed by CAS# are not listed on the Singapore List of Controlled Substances.

Code of Practice on Pollution Control Requirements: The components identified by CAS# in Section 2 (Composition and Information on Ingredients) NOT are subject to the requirements under the Singapore Code of Practice on Pollution Control.

TAIWANESE REGULATIONS:

Taiwan Existing Chemical Substances Inventory Status: Components listed by CAS# are listed on the Taiwan Existing Chemicals List.

16. OTHER INFORMATION

REFERENCES AND DATA SOURCES: Contact the supplier for information.
METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Criteria of the GHS were used for classification.
PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365
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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:
CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.
DFG MAKs: Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.
DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. **2:** Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. **3A:** Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. **3B:** Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic in vitro and structurally related to known in vivo mutagens. **4:** Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) **5:** Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.
DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.
IDLH: Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.
LOQ: Limit of Quantitation.
NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.
NIC: Notice of Intended Change.
NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.
NIOSH RELs: NIOSH's Recommended Exposure Limits.
PEL: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.
SKIN: Used when a there is a danger of cutaneous absorption.
STEL: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.
TLV: Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.
TWA: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.
WEEL: Workplace Environmental Exposure Limits from the AIHA.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.
HEALTH HAZARD: **0** Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation*: Essentially non-irritating. Mechanical irritation may occur. PII or Draize = 0. *Eye Irritation*: Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. Draize = 0. *Oral Toxicity LD_{50} Rat*: > 5000 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} Rat*: > 20 mg/L. **1** Slight Hazard: Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation*: Slightly or mildly irritating. PII or Draize > 0 < 5. *Eye Irritation*: Slightly to mildly irritating, but reversible within 7 days. Draize > 0 ≤ 25. *Oral Toxicity LD_{50} Rat*: > 500–5000 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 1000–2000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 2–20 mg/L. **2** Moderate Hazard: Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation*: Moderately irritating; primary irritant; sensitizer. PII or Draize ≥ 5, with no destruction of dermal tissue. *Eye Irritation*: Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. Draize = 26–100, with reversible effects. *Oral Toxicity LD_{50} Rat*: > 50–500 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 200–1000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.5–2 mg/L. **3** Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation*: Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. PII or Draize > 5–8, with destruction of tissue. *Eye Irritation*: Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD_{50} Rat*: > 1–50 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 20–200 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.05–0.5 mg/L. **4** Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposures; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation*: Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation*: Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD_{50} Rat*: ≤ 1 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: ≤ 0.05 mg/L.
FLAMMABILITY HAZARD: **0** Minimal Hazard: Materials that will not burn in air when exposure to a temperature of 815.5°C (1500°F) for a period of 5 minutes.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

FLAMMABILITY HAZARD (continued): **1** Slight Hazard: Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIB); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2** Moderate Hazard: Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; **3 (continued):** Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3** Serious Hazard: Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4** Severe Hazard: Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric).
PHYSICAL HAZARD: **0** *Water Reactivity*: Materials that do not react with water. *Organic Peroxides*: Materials that are normally stable, even under fire conditions and will not react with water. *Explosives*: Substances that are Non-Explosive. *Compressed Gases*: No Rating. *Pyrophorics*: No Rating. *Oxidizers*: No 0 rating. *Unstable Reactives*: Substances that will not polymerize, decompose, condense, or self-react.). **1** *Water Reactivity*: Materials that change or decompose upon exposure to moisture. *Organic Peroxides*: Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently. *Explosives*: Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases*: Pressure below OSHA definition. *Pyrophorics*: No Rating. *Oxidizers*: Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives*: Substances that may decompose condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2** *Water Reactivity*: Materials that may react violently with water. *Organic Peroxides*: Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives*: Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases*: Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3** *Water Reactivity*: Materials that may form explosive reactions with water. *Organic Peroxides*: Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives*: Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases*: Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4** *Water Reactivity*: Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides*: Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives*: Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases*: No Rating. *Pyrophorics*: Add to the definition of Flammability 4. *Oxidizers*: No 4 rating. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

DEFINITION OF TERMS (Continued)

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC_{50} for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 200 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD_{50} for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC_{50} for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD_{50} for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC_{50} for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD_{50} for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC_{50} for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin. Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD_{50} for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg.

HEALTH HAZARD (continued): **4** Materials that, under emergency conditions, can be lethal. Gases with an LC_{50} for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 1000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD_{50} for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD_{50} for acute oral toxicity is less than or equal to 5 mg/kg.

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh).

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily: Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air. Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point: Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. Autoignition Temperature: Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. LEL: Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. UEL: Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD_{50}: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC_{50}: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. mg/m^3: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDLo: Lowest dose to cause a symptom. TCLo: Lowest concentration to cause a symptom. TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo: Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** IARC: International Agency for Research on Cancer. NTP: National Toxicology Program. RTECS: Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** BEI: ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

ECOLOGICAL INFORMATION:

EC: Effect concentration in water. BCF: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log K_{OW} or log K_{OC}: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S.:

EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. DOT: U.S. Department of Transportation. SARA: Superfund Amendments and Reauthorization Act. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

CANADA:

WHMIS: Canadian Workplace Hazardous Materials Information System. TC: Transport Canada. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List.

JAPAN:

METI: Ministry of Economy, Trade and Industry.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

Identification of the Mixture:

Trade / Material Name: **SpecSeal® Firestop Putty Pads (SSP4S)**
Intended Use: Firestop and Sound Transmission

Supplier Name: **Specified Technologies, Inc.**
Address: 210 Evans Way
Somerville, New Jersey 08876
Business Phone: 1-908-526-8000
Emergency Phone: U.S., Canada: 1-800-255-3924 (24 hrs)
International: +1-813-248-0585 (collect-24 hrs)

Email: techserv@stifirestop.com

2. HAZARD IDENTIFICATION

Mixture Classification: Eye Irritant - Category 2B
Skin Irritant - Category 2
Skin Sensitizer - Category 1

Signal Word: Warning

Pictograms:

Hazard Statements: Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

Precautionary Statements:

Prevention: Wash hands thoroughly after handling.
Avoid breathing dust or vapors.
Wear chemical resistant gloves.
Contaminated work clothing must not be allowed out the workplace.

Response: If on skin: Wash with plenty of water.
If skin or eye irritation occurs or persists: Seek medical advice/attention.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.

Disposal: Dispose of waste material in accordance with local regulations.

The hazard classification of this mixture was based on the criteria established by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Components:

Chemical name	CAS No.	Hazard classification:	Concentration in Product
Polyisobutylene	9003-27-4	Eye Irritant – 2B	25%
Phenol Formaldehyde Resin	9003-35-4	Skin Irritant – 2 Skin Sensitizer - 1	11%
Hexamethylene Tramine	100-97-0	Skin Sensitizer - 1	1%

4. FIRST-AID MEASURES

Inhalation:	Move injured person into fresh air and keep person calm under observation. If uncomfortable or breathing is difficult: Seek hospital and bring along these instructions.
Skin contact:	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Eye contact:	Do not rub eye. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.
Ingestion:	Immediately rinse mouth and drink plenty of water. If ingestion is suspected after rinsing mouth, seek hospital and bring along these instructions. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

Fire extinguishing media: Use extinguishing materials suitable for the surrounding area.

Unusual fire and explosion hazards: This product is formulated to be non-flammable and non-combustible. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

6. ACCIDENTAL RELEASE MEASURES

Under normal handling conditions an accidental release is highly unlikely.

Personal precautions: Keep unauthorized persons away. For personal protection, see section 8. Avoid any exposure. Follow precautions for safe handling described in this safety data sheet.

Environmental Precautions: Avoid release to the environment. Run-off water may be contaminated by other materials and should be contained to prevent possible environmental damage.

7. HANDLING and USE

Precautions for Safe Handling: As with all chemicals, avoid getting this material ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or containers of this product. Avoid breathing fumes or vapors generated by this product. Use in a well-ventilated location.

Conditions for Safe Storage: Store containers in a cool, dry location, away from direct sunlight, sources of intense heat. Do not store above 55°C (131°F)

Specific End Use(s): None other than those listed in Section 1.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below (if applicable). Exhaust directly to the outside, taking necessary precautions for environmental protection.

Workplace Exposure Limits/Control Parameters:

		EXPOSURE LIMITS IN AIR						
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH
CHEMICAL NAME	CAS #	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3
Polyisobutylene	9003-27-4	NE	NE	NE	NE	NE	NE	NE
Phenol Formaldehyde Resin	9003-35-4	NE	NE	NE	NE	NE	NE	NE
Hexamethylene Tramine	100-97-0	NE	NE	NE	NE	NE	NE	NE

NE = Not Established.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (Continued)

During normal handling of Spec Seal® Firestop Putty Pads:

Respiratory Protection: Respiratory protection is not required for normal use. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye Protection: Wear safety glasses as appropriate for the task.

Hand Protection: Wear chemical resistant gloves.

Skin Protection: Use appropriate protective clothing to minimize exposure to skin.

9. PHYSICAL and CHEMICAL PROPERTIES

Form: Paste.

Color: Red

Odor: Mild

Odor Threshold: No data available

Flammable Limits (in air by volume, %): No data applicable.

Oxidizing Properties: No data available

Decomposition Temperature: No data available.

Percent Volatile: 0

Auto ignition Temperature: No data available.

Flash point: 160°C (320°F)

Freezing / Melting Points: No data available.

Boiling Point: > 100°C (> 212°F)

Vapor Pressure: No data available.

Specific Gravity (water = 1): 1.38

Vapor Density (air = 1): No data available.

CARB VOC:. 0 wt % (calc.)

Evaporation Rate (n-BuAc = 1): Not applicable

SCAQMD (U.S. EPA Method 24): 0 gm/L

Solubility in Water: Insoluble.

Solubility in Solvent: No data available

Coefficient Waster/Oil Distribution: No data available

pH: Not available.

10. STABILITY and REACTIVITY

Chemical Stability: This product is stable when properly stored at normal temperature and pressures.

Decomposition Products:

Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases

Materials with which substance would be incompatible: This product is incompatible with strong oxidizers.

Possibility of hazardous polymerization or reaction: Will not occur.

Conditions to avoid: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

General information: Information included in this section described the potential hazards of the hazardous components listed in section 2.

Inhalation: Inhalation of vapors may cause irritation of the nose, throat, and lungs and cause coughing. Due to the form of this product it is not expected to produce vapors.

Carcinogenicity: This product does not contain any chemical substances listed by US EPA, NTP, OSHA, IARC or ACGIH.

Contact with Skin or Eyes: Direct eye contact may cause irritation. Contact with skin may cause irritation and sensitization.

Skin Absorption: No data available.

Ingestion: No data available

12. ECOLOGICAL INFORMATION

Mobility in soil: No data available.

Persistence and Biodegradability: No data available

Bio-Accumulation Potential: No data available

Ecotoxicity: No data available

Environmental Exposure Controls: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Dispose of in accordance with local, state, and federal laws and regulations.

14. TRANSPORTATION INFORMATION

DOT (US): This product is not classified as dangerous goods.

IATA: This product is not classified as dangerous goods.

IMDG: This product is not classified as dangerous goods.

15. REGULATORY INFORMATION

U.S. SARA Reporting Requirements: This product is not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA Threshold Planning Quantity (TPQ): There are no specific Threshold Planning Quantities for components. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA Reportable Quantity (RQ): Not applicable.

U.S. TSCA Inventory Status: Components of this product are listed on the TSCA Inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain any components on the California Proposition 65 lists.

16. OTHER INFORMATION

The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, Specified Technologies, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use.

Prepared by: Specified Technologies, Inc
Preparation Date: 01/09/2017
Version: 1

SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, the Korean ISHA (Notice 2009-68), the Japanese Industrial Standard JIS Z 7250: 2000, Mexican NOM018-STPS 2000, SPRING Singapore, and the Global Harmonization Standard

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

IDENTIFICATION OF THE MIXTURE

TRADE/MATERIAL NAME: **SpecSeal® AMW Mineral Wool Insulation**

RELEVANT USE of the SUBSTANCE: Insulation Fire Barrier

USES ADVISED AGAINST: Other than Relevant Use

SUPPLIER/MANUFACTURER'S NAME: **Specified Technologies, Inc.**

Address: 210 Evans Way,
Somerville, New Jersey 08876

Business Phone: (908) 526-8000 (8:00am to 5:00pm Eastern Standard Time)

Emergency Phone: U.S., Canada: 1-800-255-3924 (24 hrs)
International: +1-813-248-0585 (collect-24 hrs)

EMAIL of Competent Person for Information on SDS: techserv@stifirestop.com

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS [Controlled Products Regulations], Mexican NOM018-STPS 2000, SPRING Singapore, and Japanese JIS Z7250 required information is included in appropriate sections based on the U.S. ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the countries listed above.

2. HAZARD IDENTIFICATION

GLOBAL HARMONIZATION AND JAPANESE JIS Z7253 LABELING AND CLASSIFICATION: This product has been classified per UN GHS Standards under U.S., Japanese and other applicable regulations that require Global Harmonization compliance.

Classification: Carcinogenic Category 2, Eye Irritation Category 2A, Specific Target Organ Toxicity (Inhalation-Respiratory Irritation) Single Exposure Category 3

Signal Word: Warning

Hazard Statements: H350i: May cause cancer by inhalation. H319: Causes serious eye irritation. H335: May cause respiratory irritation.

Precautionary Statements:

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P261: Avoid breathing vapors, fume. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves, clothing, eye protection and face protection. P284: Wear respiratory protection.

Response: P308 + P313: IF exposed or concerned: Get medical advice/attention. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P304 + P340: If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. P312: Call a POISON CENTER or doctor if you feel unwell. P321: Specific treatment (remove from exposure and treat symptoms).

Storage: P403 + P233 + P405: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

Hazard Symbols: GHS07, GHS08

KOREAN ISHA (Notice 2009-68) LABELING AND CLASSIFICATION: Classified in accordance with ISHA Notice 2009-68. Under ISHA, no differences in classification are  applicable.

3. COMPOSITION and INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Chinese IECSC Inventory	Japanese ENCS #	Korean ECL #	Taiwan NESCI ECS	WT%	LABEL ELEMENTS GHS & Japanese JIS Z7253 Classification Korean ISHA Classification GHS Hazard Codes
Proprietary Mineral Wool		Listed	Not Listed	Proprietary		94-99%	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Carcinogenic Cat. 2, Eye Irritation Cat. 2A, STOT (Inhalation-Respiratory Irritation) SE Cat. 3 Hazard Codes: H351i, H319, H335
Proprietary Phenolic Formaldehyde Resin		Listed	Proprietary	Proprietary		1-6%	SELF CLASSIFICATION GHS & JAPANESE JIS Z7253, KOREAN ISHA: Classification: Skin Sensitization Cat. 1B Hazard Codes: H317

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

Skin Exposure: If adverse skin effects occur, discontinue use and flush contaminated area. Seek medical attention if adverse effect occurs after flushing.

Inhalation: If particulates are inhaled, remove victim to fresh air.

Eye Exposure: If this product contaminates the eyes, rinse eyes under gently running water. Ingestion: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, DO NOT INDUCE VOMITING.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory disorders may be aggravated by overexposures to this product.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate exposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not determined.

AUTOIGNITION TEMPERATURE: Not available.

FLAMMABLE LIMITS (in air by volume, %): Not applicable.

FIRE EXTINGUISHING MEDIA: Use extinguishing materials suitable for the surrounding area.

UNSUITABLE FIRE EXTINGUISHING MEDIA: None known.

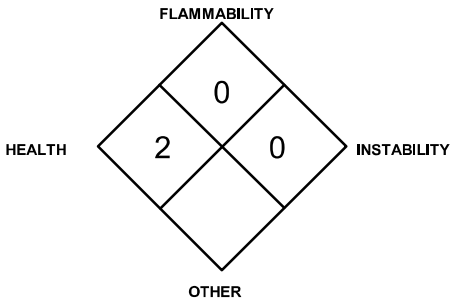
UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is non-flammable and non-combustible. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: Incipient fire responders should wear eye protection

NFPA RATING



Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Call CHEMTREC (1-800-424-9300) for emergency assistance. Or if in Canada, call CANUTEC (613-996-6666). PERSONAL PROTECTIVE EQUIPMENT: Proper protective equipment should be used. Use only non-sparking tools and equipment.

Small Spills: Wear rubber gloves, splash goggles, and appropriate body protection.

Large Spills: Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield,.

METHODS FOR CLEAN-UP AND CONTAINMENT:

Small Spills: Small releases of this product can be carefully picked-up, swept up or cleaned up avoiding generating of particulates.

Large Spills: Access to the spill area should be restricted. For large spills, dike or otherwise contain spill and sweep-up or vacuum with non-sparking vacuum, avoiding generation of dusts and particulates.

All Spills: Place all spill residue in a double plastic bag or other containment and seal. Close off sewers and take other measures to protect human health and the environment as necessary. Rinse area with soap and water solution and follow with a water rinse.. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

ENVIRONMENTAL PRECAUTIONS: Avoid release to the environment. Run-off water may be contaminated by other materials and should be contained to prevent possible environmental damage.

REFERENCE TO OTHER SECTIONS: See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

7. HANDLING and USE

PRECAUTIONS FOR SAFE HANDLING: As with all chemicals, avoid getting this material ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or containers of this product. Avoid breathing particulates generated by this product. Use in a well-ventilated location.

CONDITIONS FOR SAFE STORAGE: Store containers in a cool, dry location, away from direct sunlight, sources of intense heat.

SPECIFIC END USE(S): This product is for use as a sealant. Follow all industry standards for use of this product.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Collect all rinsates and dispose of according to applicable Federal, State, and local procedures.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below (if applicable). Exhaust directly to the outside, taking necessary precautions for environmental protection.

Workplace Exposure Limits/Control Parameters:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	mg/m^3
Proprietary Mineral Wool Fiber		10	NE	15 (total dust); 10 (vacated 1989 PEL)	NE	5 (total mineral wool dust, or 3 f/cc TWA (fibers ≤ 3.5 um diameter; ≥ 10 um length)	NE	5000 (Ca)	NE
Synthetic Vitreous Fibers		1 f/cc(F)	NE	NE	NE	NE	NE	NE	Carcinogen: IARC-3, MAK-3B, TLV-A3
Proprietary Phenolic Formaldehyde Resin		NE	NE	NE	NE	NE	NE	NE	NE

NE = Not Established. See Section 16 for Definitions of Other Terms Used

International Occupational Exposure Limits: Currently, the following additional exposure limit values have been established by various countries for the components of this mixture. More current limits may be available; individual countries should be consulted to determine if newer limits are available.

MINERAL WOOL FIBERS:

Mexico: TWA 10 mg/m3 (dust), 2004

PROTECTIVE EQUIPMENT: *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including* U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hard Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR1910.132)*, equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02,* Z94.3-M1982, *Industrial Eye and Face Protectors and* CSA Standard Z195-02, *Protective Footwear),* or standards of Japan (including JIS T 8116:2005 for glove selection, JIS T 8150:2006 for respiratory PPE, JIS T 8147:2003 for eye protectors, and JIS T 8030:2005 for protective clothing). Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. The following are NIOSH Respiratory Protective Equipment Guidelines for the Mineral Wool Fiber component to aid in selection of respiratory equipment in event of release of fibers.

MINERAL WOOL FIBERS

CONCENTRATION	RESPIRATORY PROTECTION
5X REL: Qm 10X REL: 95XQ	Any supplied-air respirator (SAR).
25X REL: Sa:Cf	Any Powered Air-Purifying Respirator (PAPR) with a high-efficiency particulate filter.
50X REL: 100F	PAPR with a tight-fitting facepiece and a high-efficiency particulate filter, or any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
Emergency or planned entry into unknown concentrations or IDLH conditions:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full-facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator with an N100, R100, or P100 filter.

Eye Protection: Wear splash goggles or safety glasses as appropriate for the task.

Hand Protection: Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

Skin Protection: Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. Full-body chemical protective clothing is recommended for emergency response procedures. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA and Canadian Standards.

9. PHYSICAL and CHEMICAL PROPERTIES

FORM: Fibrous Batt or Board
COLOR: Grey-Yellow
MOLECULAR FORMULA: Mixture.
MOLECULAR WEIGHT: Mixture.
ODOR: Mild resin.
ODOR THRESHOLD: Not available.
FLAMMABLE LIMITS (in air by volume, %): Not applicable.
OXIDIZING PROPERTIES: Not applicable.
DECOMPOSITION TEMPERATURE: Not available.
PERCENT VOLATILE: Zero.
AUTOIGNITION TEMPERATURE: Not available.
FLASH POINT: Not applicable.
MELTING POINT: 1177°C (2150°F)
BOILING POINT: Not applicable.
VAPOR PRESSURE: Not applicable.
SPECIFIC GRAVITY (water = 1): Not available.
VAPOR DENSITY (air = 1): Not applicable.
CARB VOC: Not applicable.
EVAPORATION RATE (*n*-BuAc = 1): Not applicable.
SCAQMD (U.S. EPA Method 24): Not applicable.
SOLUBILITY IN WATER: Dissolves when wet; insoluble when cured.
SOLUBILITY IN SOLVENTS: Not available.
COEFFICIENT WATER/OIL DISTRIBUTION: Not established.
pH: Not applicable.
HOW TO DETECT THIS SUBSTANCE (warning properties in event of accidental release): The appearance may be a characteristic to distinguish a release of this product.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: This product is stable when properly stored at normal temperature and pressures (see Section 7, Handling and Storage).
DECOMPOSITION PRODUCTS: Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases (e.g., carbon, silicon or nitrogen oxides, ammonia, phenols and formaldehyde). Hydrolysis: None known.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is incompatible with strong oxidizers.
POSSIBILITY OF HAZARDOUS POLYMERIZATION OR REACTION: Will not occur.
CONDITIONS TO AVOID: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE: The health hazard information provided below is pertinent to employees using this product in an occupational setting. The following paragraphs describe the symptoms of exposure by route of exposure.

Inhalation: Although unlikely due to the form of the product, inhalation of particles can cause irritation to the respiratory system. Chronic inhalation of Mineral Wool fibers can cause damage to the lungs. The Mineral Wool component is a suspect carcinogen by inhalation. Due to the form of this product, this hazard is lessened; however, all inhalation exposure must be avoided in order to mitigate carcinogenic potential.

Contact with Skin or Eyes: Direct eye contact with particulates may cause irritation, redness, and tearing from mechanical irritation. Skin contact with the Mineral Wool may cause mechanical irritation of the skin.

Skin Absorption: Components are not known to be absorbed through intact skin.

Ingestion: Ingestion is not a significant route of occupational exposure and is unlikely to occur..

Injection: Accidental injection of this product, via laceration or puncture by a contaminated object can cause redness at the site of injection.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: Exposure to this product may cause the following health effects:

Acute: Inhalation of particulates may cause irritation of respiratory system. Eye contact may cause mechanical irritation.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	2*
FLAMMABILITY HAZARD	(RED)	0
PHYSICAL HAZARD	(YELLOW)	0

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate
3 = Serious **4** = Severe * = Chronic hazard

11. TOXICOLOGICAL INFORMATION (Continued)

HEALTH EFFECTS OR RISKS FROM EXPOSURE (continued):

Chronic: Prolonged or repeated skin exposure may cause dermatitis (dry red skin). The Mineral Wool component is a suspect human carcinogen by inhalation.

TARGET ORGANS: Acute: Eyes, respiratory system. Chronic: Respiratory system.

TOXICITY DATA: Currently, the following toxicological data are available for components of 1% or more concentration.

PROPRIETARY PHENOLIC FORMALDEHYDE RESIN:

LD_{50} (Oral-Rat) 7 gm/kg: Autonomic Nervous System: other (direct) parasympathomimetic; Behavioral: muscle weakness; Lungs, Thorax, or Respiration: respiratory depression

LD_{50} (Oral-Mouse) 7 gm/kg: Autonomic Nervous System: other (direct) parasympathomimetic; Behavioral: muscle weakness; Lungs, Thorax, or Respiration: respiratory depression

MINERAL WOOL FIBER:

LD (Intratracheal-Mouse) > 20 mg/kg: Lungs, Thorax, or Respiration: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases

TCLo (Inhalation-Rat) 16 mg/m^3/6 hours/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes

TCLo (Inhalation-Rat) 5 mg/m^3/7 hours/90 weeks-intermittent: Tumorigenic: carcinogenic by RTECS criteria; Blood: leukemia

TCLo (Inhalation-Hamster) 30 mg/m^3/6 hours/13 weeks-intermittent: Lungs, Thorax, or Respiration: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: dehydrogenases

TCLo (Inhalation-Hamster) 30 mg/m^3/6 hours/78 weeks-intermittent: Lungs, Thorax, or Respiration: other changes

TDLo (Intraperitoneal-Rat) 50 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Gastrointestinal: tumors

MINERAL WOOL FIBER (continued):

TDLo (Intraperitoneal-Hamster) 400 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Gastrointestinal: tumors

TDLo (Intraperitoneal-Rabbit) 25 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Gastrointestinal: tumors

TDLo (Intratracheal-Hamster) 125 mg/kg/5 weeks-intermittent: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Intrapleural-Rat) 100 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria, tumors at site of application

TDLo (Implant-Mouse) 1600 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors; Kidney/Ureter/Bladder: tumors

Mutation Test Systems-Not Otherwise Specified (Human-Fibroblast) 10 mg/L

Mutation Test Systems-Not Otherwise Specified (Hamster Ovary) 10 mg/L

Micronucleus Test (Hamster Ovary) 2 $\mu g/cm^2$

IRRITANCY OF PRODUCT: Particles from this product may cause irritation by inhalation or eye contact.

SENSITIZATION OF PRODUCT: Although the resin component is a suspect skin sensitizer, this product is not expected to cause this adverse effect.

CARCINOGENIC POTENTIAL OF COMPONENTS: Components of this product are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

MINERAL WOOL FIBER (as synthetic vitreous fibers): ACGIH TLV-A3 (Confirmed Animal Carcinogen); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); NIOSH-Ca (Potential Occupational Carcinogen, with No Further Categorization); MAK-3B (Substances for Which In Vitro tests or animal studies have yielded evidence of carcinogenic effects that is not sufficient for classification in one of the other categories. Further studies are required before a final classification can be made.)

The remaining components are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore is neither considered to be nor suspected to be a cancer-causing agent by these agencies.

REPRODUCTIVE TOXICITY INFORMATION: Components of this product have no reported mutagenic, embryotoxic, teratogenic or reproductive toxicity.

ACGIH BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for this material.

DEGREE OF EFFECT TO THE HEALTH OF THE POLLUTING AGENT OF ENVIRONMENT OF WORK (per Mexican NOM-010 STPS-1999): 0

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability.

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential.

ECOTOXICITY: This product has not been tested for aquatic or animal toxicity. All releases to terrestrial, atmospheric and aquatic environments should be avoided. No aquatic toxicity data are available for components.

OTHER ADVERSE EFFECTS: This material is not listed as having ozone depletion potential.

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is not classified as dangerous goods under rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is not classified as Dangerous Goods by the International Maritime Organization.

OFFICIAL MEXICAN STANDARD; REGULATION FOR THE TRANSPORT OF DANGEROUS GOODS AND RESIDUES: This product is not classified as Dangerous Goods, per transport regulations of Mexico.

SINGAPORE STANDARD 286: PART A: This product has no requirements under the Specification for Caution Labeling for Hazardous Substances, Part 4: Marking of Packages, Containers and Vehicles, as it does not meet the criteria for any hazard class under this regulation.

TRANSPORT IN BULK ACCORDING TO THE IBC CODE: See the information under the individual jurisdiction listings for IBC information.

ENVIRONMENTAL HAZARDS: This material does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA Reporting Requirements: This product is not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: No; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

U.S. SARA Threshold Planning Quantity (TPQ): There are no specific Threshold Planning Quantities for components. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA Reportable Quantity (RQ): Not applicable.

U.S. TSCA Inventory Status: Components of this product are listed on the TSCA Inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): The Mineral Wool component (Listed as Glass Wool Fiber) is on the California Proposition 65 lists. WARNING! This product contains a compound known to the State of California to cause cancer.

CANADIAN REGULATIONS:

Canadian DSL/NDSL Inventory Status: Components are on the DSL or NDSL Inventories.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: Components are not on the CEPA Priorities Substances Lists.

Canadian WHMIS Classification and Symbols: This product would be categorized as a Controlled Product, D2B (Other Toxic Effects-Potential Carcinogenic Effect, Irritation) as per the Controlled Product Regulations.

CHINESE REGULATIONS:

Chinese Inventory of Existing Chemical Substances Status: Components listed by CAS# are listed on the Chinese Inventory of Existing Chemical Substances (IECSC).

JAPANESE REGULATIONS:

Japanese ENCS: Components listed by CAS# are on the ENCS Inventory or are excepted.

Japanese Ministry of Economy, Trade, and Industry (METI) Status: Components are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese METI.

Poisonous and Deleterious Substances Control Law: Components are not listed as a Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

KOREAN REGULATIONS:

Korean Existing Chemicals List (ECL) Status: Components listed by CAS# are listed on the Korean ECL Inventory.

MEXICAN REGULATIONS:

Mexican Workplace Regulations (NOM-018-STPS-2000): This product is classified as hazardous.

SINGAPORE REGULATIONS:

List of Controlled Hazardous Substances: Components listed by CAS# are not listed on the Singapore List of Controlled Substances.

Code of Practice On Pollution Control Requirements: The components identified by CAS# in Section 2 (Composition and Information on Ingredients) NOT are subject to the requirements under the Singapore Code of Practice on Pollution Control.

TAIWANESE REGULATIONS:

Taiwan Existing Chemical Substances Inventory Status: Currently, it cannot be determined if components are listed on the Taiwan Existing Chemicals List.

16. OTHER INFORMATION

REVISION DETAILS: Reviewed January 31, 2017
REFERENCES AND DATA SOURCES: Contact the supplier for information.
METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Criteria of the GHS were used for classification.
PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365
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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:
CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.
DFG MAKs: Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.
DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. **2:** Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. **3A:** Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. **3B:** Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic in vitro and structurally related to known in vivo mutagens. **4:** Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) **5:** Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.
DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.
IDLH: Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.
LOQ: Limit of Quantitation.
NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.
NIC: Notice of Intended Change.
NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.
NIOSH RELs: NIOSH's Recommended Exposure Limits.
PEL: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.
SKIN: Used when a there is a danger of cutaneous absorption.
STEL: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.
TLV: Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.
TWA: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.
WEEL: Workplace Environmental Exposure Limits from the AIHA.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.
HEALTH HAZARD: **0** Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation*: Essentially non-irritating. Mechanical irritation may occur. PII or Draize = 0. *Eye Irritation*: Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. Draize = 0. *Oral Toxicity LD_{50} Rat*: > 5000 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} Rat*: > 20 mg/L. **1** Slight Hazard: Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation*: Slightly or mildly irritating. PII or Draize > 0 < 5. *Eye Irritation*: Slightly to mildly irritating, but reversible within 7 days. Draize > 0 ≤ 25. *Oral Toxicity LD_{50} Rat*: > 500–5000 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 1000–2000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 2–20 mg/L. **2** Moderate Hazard: Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation*: Moderately irritating; primary irritant; sensitizer. PII or Draize ≥ 5, with no destruction of dermal tissue. *Eye Irritation*: Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. Draize = 26–100, with reversible effects. *Oral Toxicity LD_{50} Rat*: > 50–500 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 200–1000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.5–2 mg/L. **3** Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation*: Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. PII or Draize > 5–8, with destruction of tissue. *Eye Irritation*: Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD_{50} Rat*: > 1–50 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: > 20–200 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.05–0.5 mg/L. **4** Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposures; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation*: Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation*: Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD_{50} Rat*: ≤ 1 mg/kg. *Dermal Toxicity LD_{50} Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: ≤ 0.05 mg/L.
FLAMMABILITY HAZARD: **0** Minimal Hazard: Materials that will not burn in air when exposure to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1** Slight Hazard: Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIB); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2** Moderate Hazard: Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres;

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

HEALTH HAZARD (continued): **2 (continued):** Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3** Serious Hazard: Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4** Severe Hazard: Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric).
PHYSICAL HAZARD: **0** *Water Reactivity*: Materials that do not react with water. *Organic Peroxides*: Materials that are normally stable, even under fire conditions and will not react with water. *Explosives*: Substances that are Non-Explosive. *Compressed Gases*: No Rating. *Pyrophorics*: No Rating. *Oxidizers*: No 0 rating. *Unstable Reactives*: Substances that will not polymerize, decompose, condense, or self-react.). **1** *Water Reactivity*: Materials that change or decompose upon exposure to moisture. *Organic Peroxides*: Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently. *Explosives*: Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases*: Pressure below OSHA definition. *Pyrophorics*: No Rating. *Oxidizers*: Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives*: Substances that may decompose condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2** *Water Reactivity*: Materials that may react violently with water. *Organic Peroxides*: Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives*: Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases*: Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning

DEFINITION OF TERMS (Continued)

time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3** *Water Reactivity*: Materials that may form explosive reactions with water. *Organic Peroxides*: Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives*: Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases*: Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4** *Water Reactivity*: Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides*: Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives*: Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases*: No Rating. *Pyrophorics*: Add to the definition of Flammability 4. *Oxidizers*: No 4 rating. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC_{50} for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 200 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD_{50} for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC_{50} for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD_{50} for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC_{50} for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

HEALTH HAZARD (continued): **2 (continued)**: Materials that are primary skin irritants or sensitizers. Materials whose LD_{50} for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC_{50} for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC_{50} for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD_{50} for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin. Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD_{50} for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. **4** Materials that, under emergency conditions, can be lethal. Gases with an LC_{50} for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC_{50} for acute inhalation toxicity, if its LC_{50} is less than or equal to 1000 ppm. Dusts and mists whose LC_{50} for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD_{50} for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD_{50} for acute oral toxicity is less than or equal to 5 mg/kg.

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point: Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. Autoignition Temperature: Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. LEL: Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. UEL: Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD_{50}: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC_{50}: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. mg/m^3: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDLo: Lowest dose to cause a symptom. TCLo: Lowest concentration to cause a symptom. TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo: Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** IARC: International Agency for Research on Cancer. NTP: National Toxicology Program. RTECS: Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** BEI: ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

ECOLOGICAL INFORMATION:

EC: Effect concentration in water. BCF: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log K_{OW} or log K_{OC}: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S.:

EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

CANADA:

WHMIS: Canadian Workplace Hazardous Materials Information System. TC: Transport Canada. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List.

JAPAN: METI: Ministry of Economy, Trade and Industry.

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 Identification of the Mixture:

Trade Name:	SpecSeal® Series SSS Sealant
Product Name:	SpecSeal® Series SSS Sealant
EC No.:	Not Registered (or Not Subject to Registration)

1.2 Relevant Identified Uses of the substance and uses advised against:

Intended Use:	Firestop and Sound Transmission

1.3 Details of the Supplier of the Safety Data Sheet:

Supplier Name:	**Specified Technologies, Inc.**
Address:	210 Evans Way Somerville, New Jersey 08876, USA
Business Phone:	1-908-526-8000
Email:	techserv@stifirestop.com

1.4 Emergency Telephone Number of Supplier

Emergency Phone: USA 1-800-255-3924 (24 hrs)
International: +1-813-248-0585 (collect-24 hrs)

Hours of Operation:	24 Hours
Language:	English

2. HAZARD IDENTIFICATION

2.1 Classification of substance or mixture

This product is not a hazardous mixture as defined by the criteria established by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.1.2 Classification according to Directive EC 67/548/EEC or 1999/45/EC as amended

This product does not meet the criteria for classification in any hazard class according to Directive EC 67/548/EEC or 1999/45/EC as amended on classification, labelling and packaging of substances and mixtures.

2.2 Label Elements

Label in accordance with (EC) No. 1272/2008:	Not classified
Label in accordance with 1999/45/EC:	Not classified

2.3 Other Hazards

This product does not contain any PBT or vPvB substances.

3. COMPOSITION and INFORMATION ON INGREDIENTS

3.1 Mixture Composition

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation:	Not anticipate based on product form If vapours are inhaled, remove person to fresh air.
Skin contact:	If mechanical irritation occurs, remove contaminated clothing and wash skin gently with soap and water.
Eye contact:	If this product contaminated the eyes, rinse eyes under gently running water. Use sufficient force to open eyelids and the "roll" eyes while flushing. Minimum flushing is 20 minutes
Ingestion:	If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTRE FOR MOST CURRENT INFORMATION. If professional advice is not available, DO NOT INDUCE VOMITING. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

4.2 Most important symptoms and effects, both acute and delayed

Contact with skin, eyes, and upper respiratory system may cause mechanical irritation.

4.3 Indication of any immediate medical attention and special treatment needed

If any adverse reaction or discomfort continues from any of the above exposures, seek professional medical advice.

5. FIRE-FIGHTING MEASURES

5.1 Fire extinguishing media

5.1.1 Suitable extinguishing media

Water, foam, carbon dioxide (CO_2), and dry powder

5.1.2 Unsuitable extinguishing media

Not available

5.2 Special hazards arising from the substance or mixture

This product is formulated to be non-flammable and non-combustible. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases.

5.3 Advice for Firefighters

In large fires in poorly ventilated areas involving packaging materials respiratory protection / breathing apparatus may be required.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Under normal handling conditions an accidental release is highly unlikely.
Uncontrolled releases should be responded to by trained personnel.

6.1.2 For emergency personnel

Use personal protection recommended in Section 8 of the SDS

6.2 Environmental Precautions

The product should not be released into nature but collected and delivered according to agreement with local authorities and practices.

6.3 Methods and material for containment and clean up

In dusty environments, use vacuum equipment where possible to minimize dust levels.

6.3 References to other sections

For personal protection see section 8. For waste disposal see section 13.

7. HANDLING and USE

7.1 Precautions for Safe Handling

As with all chemicals, avoid getting this material ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or containers of this product. Avoid breathing fumes or vapors generated by this product. Use in a well-ventilated location.

7.2 Conditions for Safe Storage, including any incompatibilities

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat. Do not store above 55°C (131°F).

7.3 Specific End Use(s)

This product is used as a sealant. Follow industry standards for use of this product.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

8.2 Exposure Controls – During normal handling of SpecSeal® SSS Sealant

8.2.1 Appropriate Engineering Controls

Engineering measures:	Maintain sufficient mechanical or natural ventilation to that dust levels remain low. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

8.2.2 Personal protection equipment

Eye/face Protection:	Wear safety glasses as appropriate for the task.
Skin Protection:	Minimize direct contact with skin. Wear chemical resistant gloves if needed to minimize contact with the product.
Other Skin Protection:	After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching
Respiratory Protection:	Respiratory protection is not required for normal use. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Thermal Hazards:	Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases (e.g., aluminum, calcium, carbon, and sulfur oxides, and acrylic monomers).

8.2.3 Environmental exposure controls

This product should not be released into the environment. Controls should be engineered to prevent release to the environment, include procedures to prevent spills and releases to waterways.

9. PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form: Paste.

Color: Red

Odor: Mild acrylic.

Odor Threshold: No data available

Flammable Limits (in air by volume, %): No data applicable.

Oxidizing Properties: No data available

Decomposition Temperature: No data available.

Percent Volatile: 20

Auto ignition Temperature: No data available.

Flash point: 320ºC (608ºF)

Freezing / Melting Points: No data available.

Boiling Point: > 100°C (> 212°F)

Vapor Pressure: No data available.

Specific Gravity (water = 1): 1.24

Vapor Density (air = 1): No data available.

CARB VOC: 0.4 wt % (calc.)

Evaporation Rate (n-BuAc = 1): > 1

SCAQMD (U.S. EPA Method 24): 29.2 gm/L

Solubility in Water: Insoluble.

Solubility in Solvent: No data available

Coefficient Waster/Oil Distribution: No data available

pH: Not available.

9.2 Other information

No additional properties information available

10. STABILITY and REACTIVITY

10.1 Reactivity

This product is stable when properly stored at normal temperature and pressures.

10.2 Chemical stability

This product is stable when properly stored at normal temperature and pressures.

10.3 Possibility of hazardous reactions

This product is incompatible with strong oxidizers.

10.4 Conditions to avoid

Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

10.5 Incompatible materials

This product is incompatible with strong oxidizers.

10.6 Hazardous decomposition products

None in normal conditions of use.

Combustion: If exposed to extremely high temperatures, thermal decomposition may generate irritating fumes and toxic gases (e.g., aluminum, calcium, carbon, and sulfur oxides, and acrylic monomers).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity:	No data were identified for the product.
Serious eye damage/irritation:	Direct eye contact may cause irritation, redness, and tearing from mechanical irritation.
Skin Corrosion/Irritation:	Prolonged and repeated skin exposure may cause dermatitis (dry skin).
Respiratory or skin sensitization:	Inhalation of vapors may cause irritation of the nose, throat, and lungs and cause coughing. Due to the form of this product it is not expected to produce vapors.
Germ cell mutagenicity:	No data were identified for this product.

Carcinogenicity:	No data were identified for this finished product.
Reproductive Toxicity:	No data available for this product.
Developmental Effects:	No data were identified for this product.
STOT - Single exposure:	No data were identified for this product.
STOT - Repeated exposure:	No data were identified for this product.
Aspiration hazard:	Not relevant

Likely Routes of exposure:

Ingestion:	Ingestion is not a significant route of occupational exposure and is unlikely to occur.
Inhalation	Due to the form of this product it is not expected to produce vapors. Respiratory protection is not required for normal use.
Eye contact:	Direct eye contact may cause irritation, redness, and tearing from mechanical irritation
Symptoms associated with exposure :	Contact with skin, eyes and upper respiratory system may cause mechanical irritation.

12. ECOLOGICAL INFORMATION

This material does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not listed in Annex III under MARPOL 73/78.

12.1 Toxicity

This product is not ecotoxic to air, water or soil, by composition.

12.2 Persistence and Biodegradability

This product has not been tested for persistence or biodegradability. The mineral components are not expected to biodegrade to great extent.

12.3 Bioaccumulation Potential

This product has not been tested for bio-accumulation potential.

12.4 Mobility in soil

This product has not been tested for mobility in soil.

12.5 Results of PBT and vPvB assessment

Not relevant.

12.6 Other adverse effects:

None known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of in accordance with local, state, and federal laws and regulations.

14. TRANSPORTATION INFORMATION

14.1 UN Number

Not regulated

14.2 UN proper shipping name

Not regulated

14.3 Transportation hazard class(es)

This product is not classified as dangerous goods under rules of IATA.

14.4 Packing group

Not regulated

14.5 Environmental hazards

Not regulated

14.6 Special precautions for user

Not regulated

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This material does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulations:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.
National regulations (Germany):	
Restrictions of occupation:	Not relevant
Störfallverordnung (12.BImSchV):	Not relevant
Wassergefährdungsklasse (water hazard class):	Not relevant
Technische Anleitung Luft (TA-Luft):	Not relevant
Other regulations, restrictions and prohibition regulations:	Not relevant

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this product.

16. OTHER INFORMATION

The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, Specified Technologies, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use.

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Preparation Date: May 4, 2017
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