

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS &amp; 1272/2008/EC Standards      SDS Revision: 2.1      SDS Revision Date: 3/20/2017

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>METAL POLISH/CLEANSER</b>
1.2	Chemical Name:	Aqueous Solution
1.3	Synonyms:	45118, 45106
1.4	Trade Names:	Metal Polish/Cleanser
1.5	Product Use:	Metal Polish/Cleanser
1.6	Distributor's Name:	Precision Brand Products, Inc.
1.7	Distributor's Address:	2250 Curtiss Street, Downers Grove IL 60515 USA
1.8	Emergency Phone:	<b>ChemTrec +1 (800) 424-9300 / +1 (703) 527-3887 or Poison Control Center +1 (855) 281-1742</b>
1.9	Business Phone / Fax:	+1 (630) 969-7200 / +1 (630) 969-0310

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a hazardous substance but not as dangerous goods according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). <b>WARNING! MAY BE HARMFUL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION.</b> Classification: Acute Tox. Dermal 5; Skin Irrit. 2; Eye Irrit 2B
2.2	Label Elements:	Hazard Statements (H): H313 – May be harmful in contact with skin. H315 – Causes skin irritation. H320 – Causes eye irritation. Precautionary Statements (P): P261 – Avoid breathing mist/sprays. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/eye protection. P302+P352 – IF ON SKIN: Wash with plenty of soap and water. P333+P313 – If skin irritation or rash occurs: Get medical advice/attention. P321 – Specific treatment – see section 4 of this Safety Data Sheet. P363 Wash contaminated clothing before reuse. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 – Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).
2.3	Other Warnings:	In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS. <b>Keep out of reach of children.</b>



## 3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
WATER	7732-18-5	NA	231-791-2	60-100	NE	NE	NF	NF	NF	NE	NE	NE		
MODIFIED ALKANOLAMIDE	8051-30-7	NA	232-483-0	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
SODIUM TETRABORATE	1303-96-4	VZ2275000	NA	1-5	(2)	(6)	NF	NF	NF	(2)	NA	Na	(1) NIOSH	
SODIUM PYROPHOSPHATE DIBASIC	7758-16-9	UX6475000	231-835-0	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. Oral 5; H303													
SODIUM XYLENE SULFONATE	1300-72-7	ZE5100000	215-090-9	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. Dermal 5; Eye Irrit. 2A; H313, H319													

## 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> DO NOT INDUCE VOMITING. Contact Call +1 (855) 281-1742 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p><b>Eyes:</b> If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If the eyes or face become swollen during or following use, consult a physician or emergency room immediately.</p> <p><b>Skin:</b> Remove contaminated clothing and wash affected areas with soap and water. If discomfort persists and/or the skin reaction worsens, contact a physician immediately. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><b>Inhalation:</b> Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention.</p>
4.2	Effects of Exposure:	<p><b>Eyes:</b> Irritation upon direct contact.</p> <p><b>Skin:</b> Mildly irritating. Prolonged or repeated skin contact can result in drying and defatting of the skin, and possible sensitization in some individuals.</p> <p><b>Ingestion:</b> Irritation to the gastrointestinal tract. This material can enter the lungs during swallowing or vomiting and cause lung damage.</p> <p><b>Inhalation:</b> Irritation of respiratory tract and mucous membranes.</p>

## 4. FIRST AID MEASURES – cont'd

4.3	Symptoms of Overexposure:	<b>Eyes:</b> Redness, burning, irritation, stinging and swelling around eyes. <b>Skin:</b> Redness, burning, itching, rash, drying and defatting of the skin. <b>Ingestion:</b> Nausea, vomiting, severe abdominal pain. <b>Inhalation:</b> Coughing, wheezing, swelling of throat, irritation in mucous membranes, difficulty breathing.
4.4	Acute Health Effects:	Irritation or possible burns upon direct skin contact. Possible irreversible damage to eyes. Irritation and possible sensitization with certain individuals.
4.5	Chronic Health Effects:	Irritation and possible skin sensitization with certain individuals. Prolonged or repeated skin exposure may cause dermatitis.
4.6	Target Organs:	Eyes, skin, respiratory system.
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARDS</b>	<b>0</b>
<b>PROTECTIVE EQUIPMENT</b>	
<b>EYES</b>	<b>SKIN</b>

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	Water-based product. Non-flammable. Use media as appropriate for surrounding fire.
5.2	Extinguishing Methods:	Carbon dioxide, foam, water spray, Halon (if permitted), dry chemical extinguisher.
5.3	Firefighting Procedures:	As with any fire, firefighters should wear appropriate protective equipment including a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Hazardous decomposition products may be released. Thermal degradation may produce oxides of carbon, and/or nitrogen, hydrocarbons and/or derivatives. Fire should be fought from a safe distance. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.

## 6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment (PPE). Use safety glasses or safety goggles and face shield; use gloves and other protective clothing (e.g., apron, boots, etc.) to prevent skin contact. <b>Small Spills:</b> Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible, inert material such as vermiculite or sand to soak up the product and place into a container for later disposal. <b>Large Spills:</b> Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant. Recover as much free liquid as possible and collect in acid-resistant container. Use absorbent to pick up residue. Avoid discharging liquid directly into a sewer or surface waters.
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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid breathing mists or spray. Avoid eye and skin contact. Wear protective equipment when handling product. Keep out of the reach of children. Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Immediately clean-up and decontaminate any spills or residues.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Keep away from incompatible substances (see Section 10). Protect containers from physical damage.
7.3	Special Precautions:	Empty containers may retain hazardous product residues.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )	ACGIH		NOHSC			OSHA			OTHER
		TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		<b>CHEMICAL NAME(S)</b> SODIUM TETRABORATE								
		(2)	(6)	NF	NF	NF	(2)	NA	Na	(1) NIOSH
8.2	Ventilation & Engineering Controls:	Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).								
8.3	Respiratory Protection:	In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.								
8.4	Eye Protection:	Safety glasses with side shields must be used when handling or using this product. A protective face shield is also recommended.								
8.5	Hand Protection:	Wear protective, chemical-resistant gloves (e.g., butyl rubber, neoprene, nitrile) when using or handling this product.								
8.6	Body Protection:	Not required under normal conditions of use are recommended when handling or using large quantities (e.g., > 5 gallons (18.9 L)) of this product.								



## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Pink liquid.
9.2	Odor:	No odor
9.3	Odor Threshold:	NA
9.4	pH:	1.0
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	> 100 °C (> 212 °F)
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	LEL: NA; UEL: NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	> 1.0 (air = 1.0)
9.11	Relative Density:	1.012
9.12	Solubility:	Complete (water)
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	Evaporation Rate: < 1.0 (ethyl ether = 1.0)

## 10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal storage and use conditions.
10.2	Hazardous Decomposition Products:	Thermal decomposition may produce carbon, sulfur and nitrogen oxides, hydrocarbons and/or derivatives.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Avoid high temperatures, ignition sources and incompatible materials.
10.5	Incompatible Substances:	Strong reducing agents, acids, alkalis, oxidizing agents.

## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	Sodium Pyrophosphate, Dibasic: LD <sub>50</sub> (oral, mouse) = 2,650 mg/kg; Sodium Xylene Sulfonate: LD <sub>50</sub> (oral, rat) ≥ 7,200 mg/kg		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	NA		
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	See Section 4.2		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

## 12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	Phosphates may persist indefinitely if released into groundwater. Sodium Xylene Sulfonate: OECD Test Guideline 301B: 83-85% Readily biodegradable.
12.2	Effects on Plants & Animals:	No data available.
12.3	Effects on Aquatic Life:	No data available.

## 13. DISPOSAL CONSIDERATIONS


13.1	Waste Disposal:	Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations. Contact the appropriate agency for specific information. Treatment, transport, storage and disposal of hazardous waste must be provided by a licensed facility or waste hauler.
13.2	Special Considerations:	NA

## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

## 15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.
15.2	SARA TPQ:	NA
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
15.4	CERCLA Reportable Quantity:	NA
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS Class D2B (Materials Causing Other Toxic Effects). 
15.7	State Regulatory Information:	<u>Sodium Pyrophosphate, Dibasic</u> is found on the following state criteria lists: New Jersey Right-to-Know List (NJ), and Pennsylvania Right-to-Know List (PA). None of the ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).
15.8	Other Requirements:	NA

## 16. OTHER INFORMATION

16.1	Other Information:	<b>WARNING! MAY BE HARMFUL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION.</b> Avoid breathing mist/sprays. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment – see section 4 of this Safety Data Sheet. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. . <b>KEEP OUT OF REACH OF CHILDREN.</b>
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Precision Brand Products, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

16.4	Prepared for:	<b>Precision Brand Products, Inc.</b> 2250 Curtiss Street Downers Grove, IL 60515 USA Tel: +1 (630) 969-7200 Fax: +1 (630) 969-0310 <a href="http://www.precisionbrand.com">http://www.precisionbrand.com</a>	
16.5	Prepared by:	<b>ShipMate, Inc.</b> P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 <a href="http://www.shipmate.com">http://www.shipmate.com</a>	

## DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

### GENERAL INFORMATION:

<b>CAS No.</b>	Chemical Abstract Service Number
<b>RTECS No.</b>	Registry of Toxic Effects of Chemical Substances Number
<b>EINECS No.</b>	European Inventory of Existing Commercial Chemical Substances Number

### EXPOSURE LIMITS IN AIR:

<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short Term Exposure Limit
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average

### FIRST AID MEASURES:

<b>CPR</b>	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

### HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

<b>HEALTH</b>
<b>FLAMMABILITY</b>
<b>PHYSICAL HAZARDS</b>
<b>PERSONAL PROTECTION</b>

### PERSONAL PROTECTION RATINGS:

<b>A</b>		<b>G</b>	
<b>B</b>		<b>H</b>	
<b>C</b>		<b>I</b>	
<b>D</b>		<b>J</b>	
<b>E</b>		<b>K</b>	
<b>F</b>		<b>X</b>	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

### OTHER STANDARD ABBREVIATIONS:

<b>Carc</b>	Carcinogenic
<b>Irrit</b>	Irritant
<b>NA</b>	Not Available
<b>NR</b>	No Results
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>Sens</b>	Sensitization
<b>STOT RE</b>	Specific Target Organ Toxicity – Repeat Exposure
<b>STOT SE</b>	Specific Target Organ Toxicity – Single Exposure

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

<b>FLAMMABILITY LIMITS IN AIR:</b>	
<b>Autoignition Temperature</b>	Minimum temperature required to initiate combustion in air with no other source of ignition
<b>LEL</b>	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
<b>UEL</b>	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

### HAZARD RATINGS:

<b>0</b>	Minimal Hazard
<b>1</b>	Slight Hazard
<b>2</b>	Moderate Hazard
<b>3</b>	Severe Hazard
<b>4</b>	Extreme Hazard
<b>ACD</b>	Acidic
<b>ALK</b>	Alkaline
<b>COR</b>	Corrosive
<b>W</b>	Use No Water
<b>OX</b>	Oxidizer
<b>TREFOIL</b>	Radioactive

### TOXICOLOGICAL INFORMATION:

<b>LD<sub>50</sub></b>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
<b>LC<sub>50</sub></b>	Lethal concentration (gases) which kills 50% of the exposed animal
<b>ppm</b>	Concentration expressed in parts of material per million parts
<b>TD<sub>10</sub></b>	Lowest dose to cause a symptom
<b>TCLo</b>	Lowest concentration to cause a symptom
<b>TD<sub>10</sub>, LD<sub>10</sub>, &amp; LD<sub>01</sub> or TC, TC<sub>01</sub>, LC<sub>10</sub>, &amp; LC<sub>01</sub></b>	Lowest dose (or concentration) to cause lethal or toxic effects
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>BCF</b>	Bioconcentration Factor
<b>TL<sub>m</sub></b>	Median threshold limit
<b>log K<sub>OW</sub> or log K<sub>OC</sub></b>	Coefficient of Oil/Water Distribution

### REGULATORY INFORMATION:

<b>WHMIS</b>	Canadian Workplace Hazardous Material Information System
<b>DOT</b>	U.S. Department of Transportation
<b>TC</b>	Transport Canada
<b>EPA</b>	U.S. Environmental Protection Agency
<b>DSL</b>	Canadian Domestic Substance List
<b>NDSL</b>	Canadian Non-Domestic Substance List
<b>PSL</b>	Canadian Priority Substances List
<b>TSCA</b>	U.S. Toxic Substance Control Act
<b>EU</b>	European Union (European Union Directive 67/548/EEC)
<b>WGK</b>	Wassergefährdungsklassen (German Water Hazard Class)

### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

### CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS &amp; 1272/2008/EC Standards      SDS Revision: 2.0      SDS Revision Date: 3/16/2017

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>TOOL-BLACK® LIQUID</b>
1.2	Chemical Name:	Acid Mixture
1.3	Synonyms:	45109, 45110, 45112, 45117
1.4	Trade Names:	Tool-Black® Liquid
1.5	Product Use:	Solution for Blackening Iron and Steel
1.6	Distributor's Name:	Precision Brand Products, Inc.
1.7	Distributor's Address:	2250 Curtiss Street, Downers Grove IL 60515 USA
1.8	Emergency Phone:	<b>ChemTrec +1 (800) 424-9300 / +1 (703) 527-3887 or Poison Control Center +1 (855) 281-1742</b>
1.9	Business Phone / Fax:	+1 (630) 969-7200 / +1 (630) 969-0310

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a hazardous substance and as dangerous goods according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). <b>DANGER! TOXIC IF SWALLOWED. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.</b> Classification: Acute Toxicity 3; Skin Corrosion 1B; Acute Tox. 4; Chronic Aquatic Toxicity 1
2.2	Label Elements:	<p><u>Hazard Statements</u> (H): H301 – Toxic if swallowed. H314 – Causes severe skin burns and eye damage. H319 Causes serious eye irritation. H335 – May cause respiratory irritation. H410 – Very toxic to aquatic life with long lasting effects.</p> <p><u>Precautionary Statements</u> (P): P260 – Do not breathe dust or mist. P264 – Wash thoroughly with soap and water after handling. P270 – Do not eat drink or smoke when using this product. P271 – Use only outdoors or in a well-ventilated area. P273 – Avoid release to the environment. P280 – Wear protective gloves/ eye and face protection. P301+P330+P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P332+P313 – If skin irritation occurs: Get medical advice/attention. P363 – Wash contaminated clothing before reuse. P304+P340 – IF INHALED: Remove person to fresh air at once and keep comfortable for breathing. P310 – Immediately call a POISON CENTER/doctor. P321 Specific treatments see this container label. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P391 – Collect spillage. P403+P233 – Store in a well ventilated place. Keep container tightly closed. P405 – Store locked up. P501 - Dispose of contents/ container to an approved waste disposal plant.</p>
2.3	Other Warnings:	In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS. Keep out of reach of children.



## 3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					TLV	STEL	ppm	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
WATER	7732-18-5	ZC0110000	231-791-2	60-100	NE	NE	NF	NF	NF	NE	NE	NE		
SELENIOUS ACID	7783-00-8	VS7175000	231-974-7	1-5	(0.2)	NA	(0.2)	NF	NF	(0.2)	NA	NA		
COPPER (II) NITRATE, TRIHYDRATE	10031-43-3	GI7875000	221-838-5	1-5	(1)	NA	NF	NF	NF	NA	NA	NA		
NITRIC ACID	7697-37-2	QU5775000	231-714-2	1-5	2	4	2	NF	NF	2	NA	25		
HYDROCHLORIC ACID	7647-01-0	MW4025000	231-595-7	1-5	2	NA	NF	NF	5	5	NA	50		
PHOSPHORIC ACID	7664-38-2	TB6300000	231-633-2	1-5	(1)	(3)	NF	NF	NF	NA	NA	1000		

## 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> Do not induce vomiting. Call +1 (855) 281-1742 for emergency medical advice. If vomiting occurs, keep victim's head lowered (forward) to keep vomit from entering the lungs. Call 911 for emergency medical transport if any symptoms noted.</p> <p><b>Eyes:</b> Remove and discard contact lenses if worn and flush eyes with large amounts of water for at least 20 minutes. Seek immediate medical attention when done rinsing eyes.</p> <p><b>Skin:</b> Remove contaminated clothing and wash exposed skin with large amounts of soap and water. Seek medical attention if any blistering, swelling or open sores develop.</p> <p><b>Inhalation:</b> Move victim to fresh air. Contact emergency medical services (911) if any difficulty in breathing occurs or if victim loses consciousness.</p>															
4.2	Effects of Exposure:	<p><b>Eyes:</b> Severe or permanent eye damage.</p> <p><b>Skin:</b> Burns upon direct contact.</p> <p><b>Ingestion:</b> Severe burns of mouth, throat, stomach.</p> <p><b>Inhalation:</b> Severe irritation or burns in respiratory tract and mucous membranes. Possible lung damage.</p>															
4.3	Symptoms of Overexposure:	<p><b>Eyes:</b> Redness, burning, irritation, and swelling around eyes</p> <p><b>Skin:</b> Redness, burning, itching, rash, blistering of skin.</p> <p><b>Ingestion:</b> Nausea, vomiting, severe abdominal pain.</p> <p><b>Inhalation:</b> Coughing, wheezing, swelling of throat, irritation in mucous membranes, difficulty breathing.</p>															
4.4	Acute Health Effects:	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if swallowed. Causes burns. May be harmful if absorbed through skin.															
4.5	Chronic Health Effects:	May damage the nervous system, kidney and/or liver.															
4.6	Target Organs:	Eyes, skin, nervous system, kidneys, liver, respiratory system.															
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system) or impaired kidney function may be more susceptible to the effects of this substance. 1`	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="background-color: #0000FF; color: white; padding: 2px;"><b>HEALTH</b></td> <td style="text-align: center; padding: 2px;"><b>3</b></td> </tr> <tr> <td style="background-color: #FF0000; color: white; padding: 2px;"><b>FLAMMABILITY</b></td> <td style="text-align: center; padding: 2px;"><b>0</b></td> </tr> <tr> <td style="background-color: #FFA500; color: white; padding: 2px;"><b>PHYSICAL HAZARDS</b></td> <td style="text-align: center; padding: 2px;"><b>2</b></td> </tr> <tr> <td colspan="2" style="background-color: #FFFFFF; color: black; padding: 2px;"><b>PROTECTIVE EQUIPMENT</b></td> </tr> <tr> <td style="background-color: #FFFFFF; color: black; padding: 2px;"><b>EYES</b></td> <td style="text-align: center; padding: 2px;"><b>H</b></td> </tr> <tr> <td style="background-color: #FFFFFF; color: black; padding: 2px;"><b>SKIN</b></td> <td></td> </tr> <tr> <td style="background-color: #FFFFFF; color: black; padding: 2px;"><b>LUNGS</b></td> <td></td> </tr> </table>	<b>HEALTH</b>	<b>3</b>	<b>FLAMMABILITY</b>	<b>0</b>	<b>PHYSICAL HAZARDS</b>	<b>2</b>	<b>PROTECTIVE EQUIPMENT</b>		<b>EYES</b>	<b>H</b>	<b>SKIN</b>		<b>LUNGS</b>	
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<b>PROTECTIVE EQUIPMENT</b>																	
<b>EYES</b>	<b>H</b>																
<b>SKIN</b>																	
<b>LUNGS</b>																	
4.8	Notes to Physician:	This product contains <u>Selenious Acid</u> and is potentially fatal if ingested even in small amounts. 24-hour admission should be considered in asymptomatic or minimally symptomatic patients as delayed toxic effects including pulmonary edema and multi-organ failure may occur. 24/7 medical toxicology consultation is available at +1 (855) 281-1742.															

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	Non-flammable. May react with metals to release hydrogen gas, which can form explosive mixtures with air. May intensify fire; oxidizer. Keep/Store away from clothing/ combustible materials.	
5.2	Extinguishing Methods:	Use fire-extinguishing media appropriate for surrounding materials.	
5.3	Firefighting Procedures:	As with any fire, firefighters should wear appropriate protective equipment including a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Fight fires as for surrounding materials. Hazardous decomposition products may be released. Thermal degradation may produce oxides of carbon, phosphorous, selenium and/or nitrogen, hydrocarbons and/or derivatives. Fire should be fought from a safe distance. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.	

## 6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	<p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment (PPE). Use safety glasses or safety goggles and face shield; use gloves and other protective clothing (e.g., apron, boots, etc.) to prevent skin contact.</p> <p><b>Small Spills:</b> Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible, inert material such as vermiculite or sand to soak up the product and place into a container for later disposal.</p> <p><b>Large Spills:</b> Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant. Recover as much free liquid as possible and collect in acid-resistant container. Use absorbent to pick up residue. Avoid discharging liquid directly into a sewer or surface waters.</p>
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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid breathing mists or spray. Avoid eye and skin contact. Wear protective equipment when handling product. Keep out of the reach of children. Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Do not expose to heat and flame. Use only in ventilated areas. Keep out of the reach of children. Immediately clean-up and decontaminate any spills or residues.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Store in acid-resistant containers. Keep containers covered when not in use. Avoid temperatures above 40°C (120°F). Keep away from incompatible substances (see Section 10). Protect containers from physical damage.
7.3	Special Precautions:	Empty containers may retain hazardous product residues. Keep/Store away from clothing/ combustible materials.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )	CHEMICAL NAME(S)	ACGIH		NOHSC			OSHA			OTHER
			TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		SELENIOS ACID	(0.2)	NA	(0.2)	NF	NF	(0.2)	NA	NA	
		COPPER (II) NITRATE, RIHYDRATE	(1)	NA	NF	NF	NF	NA	NA	NA	
		NITRIC ACID	2	4	2	NF	NF	2	NA	25	
		HYDROCHLORIC ACID	2	NA	NF	NF	5	NA	NA	50	
		PHOSPHORIC ACID	(1)	(3)	NF	NF	NF	NA	NA	1000	
8.2	Ventilation & Engineering Controls:	Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).									
8.3	Respiratory Protection:	In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.									
8.4	Eye Protection:	Safety glasses with side shields must be used when handling or using this product. A protective face shield is also recommended.									
8.5	Hand Protection:	Wear protective, chemical-resistant gloves (e.g., neoprene) when using or handling this product.									
8.6	Body Protection:	A chemical resistant apron and/or protective clothing are recommended when handling or using this product.									

## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Clear liquid
9.2	Odor:	Odorless
9.3	Odor Threshold:	0.29 to 0.98 ppm (Nitric Acid)
9.4	pH:	0.85
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	> 100 °C (> 212 °F)
9.7	Flashpoint:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	< 1.0 (air = 1.0)
9.11	Relative Density:	1.055
9.12	Solubility:	Complete (water)
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	Evaporation Rate: < 1.0 (ethyl ether = 1.0)

## 10. STABILITY & REACTIVITY

10.1	Stability:	Stable at normal temperatures.
10.2	Hazardous Decomposition Products:	Reaction with organics and strong reducing agents can produce organoselenides and hydrogen selenide. Thermal decomposition may produce selenium, nitrogen, phosphoric and copper oxides.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Excessive heat, shock, friction.
10.5	Incompatible Substances:	Cyanides, water-reactive substances, strong reducing agents, chlorinated cleaners or sanitizers, combustible organic materials, most metals.

## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	Phosphoric Acid: LD <sub>50</sub> (oral, rat) = 1,530 mg/kg; LD <sub>50</sub> (oral, rat) = 4,640 mg/kg; Hydrochloric Acid: LD <sub>50</sub> (oral, rat) = 900 mg/kg; Copper Nitrate Trihydrate: LD <sub>50</sub> (oral, rat) = 794 mg/kg		
11.3	Acute Toxicity:	See Section 2.4		
11.4	Chronic Toxicity:	See Section 2.5		
11.5	Suspected Carcinogen:	Components in this product are listed by IARC as Group 3 (Not classifiable as to its carcinogenicity to humans)		
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product contains nickel sulfate, which is reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		



## 11. TOXICOLOGICAL INFORMATION – cont'd

11.7	Irritancy of Product:	See Section 4.2
11.8	Biological Exposure Indices:	NE
11.9	Physician Recommendations:	Treat symptomatically.

## 12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	<u>Hydrochloric Acid</u> : LC <sub>50</sub> (gambusia affinis-mosquito fish, 96h) - 282 mg/L
12.2	Effects on Plants & Animals:	No data available.
12.3	Effects on Aquatic Life:	Very toxic to aquatic life with long lasting effects. <u>Phosphoric Acid</u> : EC <sub>50</sub> (Daphnia magna, 12h) = 4.6 mg/L

## 13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations. Contact the appropriate agency for specific information. Treatment, transport, storage and disposal of hazardous waste must be provided by a licensed facility or waste hauler.
13.2	Special Considerations:	U.S. EPA Hazardous Waste – Characteristic - Corrosive (D002), Characteristic - Toxic (D010)

## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.2	IATA (AIR):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 0.1 L)	
14.3	IMDG (OCN):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.5	ADR/RID (EU):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN3264, LIQUIDOS, CORROSIVOS, ACIDO, INORGANICO, N.E.P. (ACIDO SELENIO, ACIDO FOSFORICO), 8, II, (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN3264, CORROSIVE LIQUIDS, ACIDIC, INORGANIC, N.O.S. (SELENIOUS ACID, PHOSPHORIC ACID), 8, II, (LTD QTY, IP VOL ≤ 1.0 L)	

## 15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product contains <u>Nitric Acid</u> , <u>Hydrochloric Acid</u> , <u>Selenious Acid</u> , <u>Cupric Nitrate</u> , and <u>Phosphoric Acid</u> , substances subject to SARA Title III, section 313 reporting requirements.
15.2	SARA TPQ:	302 TPQ (Nitric Acid): 1,000 lbs (454 kg)
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
15.4	CERCLA Reportable Quantity:	<u>Selenious Acid</u> : 10 lbs (4.54 kg); <u>Nitric Acid</u> : 1,000 lbs (454 kg); <u>Phosphoric Acid</u> : 5,000 lbs (2,270 kg); <u>Hydrochloric Acid</u> : 5,000 lbs (2,270 kg); <u>Cupric Nitrate</u> : 100 lbs (45.4 kg)
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS Class E (Corrosive Material). WHMIS Class D1 (Materials Causing Immediate and Serious Toxic Effects).
15.7	State Regulatory Information:	<u>Selenious Acid</u> is found on the following state criteria lists: Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Minnesota Hazardous Substances List (MN), Pennsylvania Right-to-Know List (PA), and Wisconsin Hazardous Substances List (WI) <u>Nitric Acid</u> is found on the following state criteria lists: FL, MA, MN, New Jersey Right-to-Know List (NJ), PA, and Washington Permissible Exposures List (WA). <u>Hydrochloric Acid</u> is found on the following state criteria lists: FL, MA, MN, NJ, PA, WA <u>Phosphoric Acid</u> is found on the following state criteria lists: FL, MA, MN, PA No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).
15.8	Other Requirements:	NA

## 16. OTHER INFORMATION

16.1	Other Information:	<b>DANGER! TOXIC IF SWALLOWED. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.</b> Causes severe burns to eyes and skin. Avoid excessive heat. Do not breathe dust/fumes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. <b>KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</b>	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Precision Brand Products, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	<b>Precision Brand Products, Inc.</b> 2250 Curtiss Street Downers Grove, IL 60515 USA Tel: +1 (630) 969-7200 Fax: +1 (630) 969-0310 <a href="http://www.precisionbrand.com">http://www.precisionbrand.com</a>	 <b>PRECISION BRAND</b>
16.5	Prepared by:	<b>ShipMate, Inc.</b> P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 <a href="http://www.shipmate.com">http://www.shipmate.com</a>	 <b>ShipMate</b> <i>Dangerous Goods Training &amp; Consulting</i>

## DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

### GENERAL INFORMATION:

<b>CAS No.</b>	Chemical Abstract Service Number
<b>RTECS No.</b>	Registry of Toxic Effects of Chemical Substances Number
<b>EINECS No.</b>	European Inventory of Existing Commercial Chemical Substances Number

### EXPOSURE LIMITS IN AIR:

<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short Term Exposure Limit
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average

### FIRST AID MEASURES:

<b>CPR</b>	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

### HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

<b>HEALTH</b>
<b>FLAMMABILITY</b>
<b>PHYSICAL HAZARDS</b>
<b>PERSONAL PROTECTION</b>

### PERSONAL PROTECTION RATINGS:

<b>A</b>		<b>G</b>	
<b>B</b>		<b>H</b>	
<b>C</b>		<b>I</b>	
<b>D</b>		<b>J</b>	
<b>E</b>		<b>K</b>	
<b>F</b>		<b>X</b>	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

### OTHER STANDARD ABBREVIATIONS:

<b>Carc</b>	Carcinogenic
<b>Irrit</b>	Irritant
<b>NA</b>	Not Available
<b>NR</b>	No Results
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>Sens</b>	Sensitization
<b>STOT RE</b>	Specific Target Organ Toxicity – Repeat Exposure
<b>STOT SE</b>	Specific Target Organ Toxicity – Single Exposure

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

<b>FLAMMABILITY LIMITS IN AIR:</b>	
<b>Autoignition Temperature</b>	Minimum temperature required to initiate combustion in air with no other source of ignition
<b>LEL</b>	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
<b>UEL</b>	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

### HAZARD RATINGS:

<b>0</b>	Minimal Hazard
<b>1</b>	Slight Hazard
<b>2</b>	Moderate Hazard
<b>3</b>	Severe Hazard
<b>4</b>	Extreme Hazard
<b>ACD</b>	Acidic
<b>ALK</b>	Alkaline
<b>COR</b>	Corrosive
<b>W</b>	Use No Water
<b>OX</b>	Oxidizer
<b>TREFOIL</b>	Radioactive

### TOXICOLOGICAL INFORMATION:

<b>LD<sub>50</sub></b>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
<b>LC<sub>50</sub></b>	Lethal concentration (gases) which kills 50% of the exposed animal
<b>ppm</b>	Concentration expressed in parts of material per million parts
<b>TD<sub>10</sub></b>	Lowest dose to cause a symptom
<b>TCLo</b>	Lowest concentration to cause a symptom
<b>TD<sub>10</sub>, LD<sub>10</sub>, &amp; LD<sub>01</sub> or TC, TC<sub>01</sub>, LC<sub>10</sub>, &amp; LC<sub>01</sub></b>	Lowest dose (or concentration) to cause lethal or toxic effects
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>BCF</b>	Bioconcentration Factor
<b>TL<sub>m</sub></b>	Median threshold limit
<b>log K<sub>OW</sub> or log K<sub>OC</sub></b>	Coefficient of Oil/Water Distribution

### REGULATORY INFORMATION:

<b>WHMIS</b>	Canadian Workplace Hazardous Material Information System
<b>DOT</b>	U.S. Department of Transportation
<b>TC</b>	Transport Canada
<b>EPA</b>	U.S. Environmental Protection Agency
<b>DSL</b>	Canadian Domestic Substance List
<b>NDSL</b>	Canadian Non-Domestic Substance List
<b>PSL</b>	Canadian Priority Substances List
<b>TSCA</b>	U.S. Toxic Substance Control Act
<b>EU</b>	European Union (European Union Directive 67/548/EEC)
<b>WGK</b>	Wassergefährdungsklassen (German Water Hazard Class)

### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

### CLP/GHS (1272/2008/EC) PICTOGRAMS:


GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS &amp; 1272/2008/EC Standards      SDS Revision: 2.0      SDS Revision Date: 3/14/2017

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>PREVENT® NON-VOC FORMULA</b>
1.2	Chemical Name:	Petroleum Distillate
1.3	Synonyms:	45119, 45116
1.4	Trade Names:	Prevent® Non-VOC Formula
1.5	Product Use:	Lubricate, Penetrate, Displace Water, Protect Surfaces from Corrosion
1.6	Distributor's Name:	Precision Brand Products, Inc.
1.7	Distributor's Address:	2250 Curtiss Street, Downers Grove IL 60515 USA
1.8	Emergency Phone:	<b>ChemTrec +1 (800) 424-9300 / +1 (703) 527-3887 or Poison Control Center +1 (855) 281-1742</b>
1.9	Business Phone / Fax:	+1 (630) 969-7200 / +1 (630) 969-0310

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a hazardous substance but not as dangerous goods according to the classification criteria of [NOHSC: 1088 (2004)] and ADG Code (Australia). <b>DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAY. MAY CAUSE AN ALLERGIC SKIN REACTION.</b> Classification: Asp. 1; Sens. Skin 1B	
2.2	Label Elements:	Hazard Statements (H): H304 – May be fatal if swallowed and enters airways. H317 – May cause an allergic skin reaction. Precautionary Statements (P): P233 – Keep container tightly closed. P280 – Wear protective gloves/eye protection. P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P301 - Do NOT induce vomiting. P261 Avoid breathing mist/sprays. P272 – Contaminated work clothing should not be allowed out of the workplace. P302+P352 – IF ON SKIN: Wash with plenty of soap and water. P333+P313 – If skin irritation or rash occurs: Get medical advice/attention. P321 – Specific treatment – see section 4 of this Safety Data Sheet. P363 Wash contaminated clothing before reuse. P403+P235 – Store in a cool, well-ventilated place. Keep cool. P405 – Store locked up. P501 - Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).	
2.3	Other Warnings:	In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS. <b>Keep out of reach of children.</b>	

## 3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
WHITE MINERAL OIL	8042-47-5	PY8047000	232-455-8	60-100	(5)	NA	(5)	NA	NA	(5)	(10) *	(2500)	* NIOSH	
	Asp. Tox. 1; H304, H226													
SEVERELY HYDROTREATED NAPHTHENIC PETROLEUM OIL *	64742-52-5	NA	265-155-0	10-30	(5)	(10)	(5)	NA	NA	(5)	NA	NA	OIL MIST	
	* contains less than 3% Dimethyl Sulfoxide													
BARIUM ALKYLNAPHTHALENE SULFATE	25619-56-1	NA	247-132-7	7-13	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; H302, H315, H317, H319, H332													

## 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> DO NOT INDUCE VOMITING. Contact SafetyCall +1 (855) 281-1742 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p><b>Eyes:</b> If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If the eyes or face become swollen during or following use, consult a physician or emergency room immediately.</p> <p><b>Skin:</b> Remove contaminated clothing and wash affected areas with soap and water. If discomfort persists and/or the skin reaction worsens, contact a physician immediately. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><b>Inhalation:</b> Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention.</p>
4.2	Effects of Exposure:	<p><b>Eyes:</b> Irritation upon direct contact.</p> <p><b>Skin:</b> Irritation and possible dermatitis.</p> <p><b>Ingestion:</b> Irritation to the gastrointestinal tract. Aspiration of mineral oil into the lungs can cause chemical pneumonia.</p> <p><b>Inhalation:</b> Inhalation of high vapor concentrations may cause central nervous system effects, and symptoms such as headache, dizziness, and disorientation.</p>

## 4. FIRST AID MEASURES – cont'd

4.3	Symptoms of Overexposure:	<p><b>Eyes:</b> Redness, burning, irritation, and swelling around eyes.</p> <p><b>Skin:</b> Redness, burning, itching, rash, and scaling of the skin (dermatitis).</p> <p><b>Ingestion:</b> Nausea, vomiting, severe abdominal pain.</p> <p><b>Inhalation:</b> Coughing, wheezing, swelling of throat, irritation in mucous membranes, difficulty breathing.</p>										
4.4	Acute Health Effects:	May be fatal if swallowed and enters airways. May cause an allergic skin reaction. May be harmful if swallowed. Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.										
4.5	Chronic Health Effects:	May damage the nervous system, kidney and/or liver.										
4.6	Target Organs:	Eyes, skin, lungs.										
4.7	Medical Conditions Aggravated by Exposure:	Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases, or impaired liver or kidney function should avoid exposure.										
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #0000FF; color: white;"><b>HEALTH</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #FF0000; color: white;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: #FFA500; color: white;"><b>PHYSICAL HAZARDS</b></td> <td style="text-align: center;"><b>0</b></td> </tr> <tr> <td colspan="2"><b>PROTECTIVE EQUIPMENT</b></td> </tr> <tr> <td><b>EYES</b></td> <td><b>SKIN</b></td> </tr> </table>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARDS</b>	<b>0</b>	<b>PROTECTIVE EQUIPMENT</b>		<b>EYES</b>	<b>SKIN</b>
<b>HEALTH</b>	<b>1</b>											
<b>FLAMMABILITY</b>	<b>1</b>											
<b>PHYSICAL HAZARDS</b>	<b>0</b>											
<b>PROTECTIVE EQUIPMENT</b>												
<b>EYES</b>	<b>SKIN</b>											

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers. Avoid all ignition sources such as sparks, heat and open flames. Product or residue can ignite explosively.	
5.2	Extinguishing Methods:	Carbon dioxide, foam, low velocity water fog, Halon (if permitted), dry chemical extinguisher.	
5.3	Firefighting Procedures:	As with any fire, firefighters should wear appropriate protective equipment including a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Treat as hot oil. Hazardous decomposition products may be released. Thermal degradation may produce oxides of carbon, and/or nitrogen, hydrocarbons and/or derivatives. Fire should be fought from a safe distance. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway.	

## 6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment (PPE). Use safety glasses or safety goggles and face shield; use gloves and other protective clothing (e.g., apron, boots, etc.) to prevent skin contact. <b>Small Spills:</b> Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible, inert material such as vermiculite or sand to soak up the product and place into a container for later disposal. <b>Large Spills:</b> Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Use ONLY non-sparking tools. Wear appropriate protective equipment including respiratory protection as conditions warrant. Recover as much free liquid as possible and collect in acid-resistant container. Use absorbent to pick up residue. Avoid discharging liquid directly into a sewer or surface waters.
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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid breathing mists or spray. Avoid eye and skin contact. Wear protective equipment when handling product. Keep out of the reach of children. Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Do not expose to heat and flame. Use only in ventilated areas. Immediately clean-up and decontaminate any spills or residues.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Store in closed containers. Avoid temperatures above 40°C (120°F). Keep away from incompatible substances (see Section 10). Protect containers from physical damage.
7.3	Special Precautions:	Empty containers may retain hazardous product residues.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )		ACGIH		NOHSC			OSHA			OTHER
		<b>CHEMICAL NAME(S)</b>	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		WHITE MINERAL OIL	(5)	NA	(5)	NA	NA	(5)	(10)	(2500)	* NIOSH
		SEVERELY HYDROTREATED NAPHTHENIC PETROLEUM OIL	(5)	(10)	(5)	NA	NA	(5)	NA	NA	OIL MIST
8.2	Ventilation & Engineering Controls:	Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).									
8.3	Respiratory Protection:	In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.									

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd

8.4	Eye Protection:	Safety glasses with side shields must be used when handling or using this product. A protective face shield is also recommended.	
8.5	Hand Protection:	Wear protective, chemical-resistant gloves (e.g., neoprene) when using or handling this product.	
8.6	Body Protection:	Not required under normal conditions of use. A chemical resistant apron and/or protective clothing are recommended when handling or using large quantities (e.g., > 5 gallons (18.9 L)) of this product.	

## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Opaque, light brown liquid
9.2	Odor:	Kerosene odor
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	> 110 °C (> 230 °F)
9.7	Flashpoint:	120 °C (248 °F), open cup
9.8	Upper/Lower Flammability Limits:	LEL: NA; UEL: NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	> 1.0 (air = 1.0)
9.11	Relative Density:	0.8057
9.12	Solubility:	Immiscible (water)
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	Evaporation Rate: < 1.0 (ethyl ether = 1.0); VOC: 0.2 lbs/gallon

## 10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal storage and use conditions.
10.2	Hazardous Decomposition Products:	Thermal decomposition may produce carbon and nitrogen oxides, hydrocarbons and/or derivatives.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Avoid high temperatures, ignition sources and incompatible materials.
10.5	Incompatible Substances:	Strong reducing agents, acids, alkalis, oxidizing agents.

## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	Severely Hydrotreated Naphthenic Petroleum Oil (Mineral Oil): LD50 (oral, rat) > 5,000 mg/kg		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	IARC 3 (not classifiable as to carcinogenicity in humans (for mineral oils, highly refined))		
11.6	Reproductive Toxicity:	This product is not reported to cause reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to cause teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.		
11.7	Irritancy of Product:	See Section 4.2		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

## 12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	This product is expected to have a low potential to degrade and thus is expected to persist in the environment. <input type="checkbox"/> Do not allow to enter into soil/subsoil. If product enters soil, it will be mobile and may contaminate groundwater. <input type="checkbox"/>
12.2	Effects on Plants & Animals:	No data available.
12.3	Effects on Aquatic Life:	No data available.

## 13. DISPOSAL CONSIDERATIONS


13.1	Waste Disposal:	Review current local, state and federal laws, codes, statutes and regulations to determine current status and appropriate disposal method for the ingredients listed in Section 2. Any disposal practice must be in compliance with local, state, and federal laws and regulations. Contact the appropriate agency for specific information. Treatment, transport, storage and disposal of hazardous waste must be provided by a licensed facility or waste hauler.
13.2	Special Considerations:	If incinerated, the resulting ash will contain extractable barium. A waste with extractable barium of 100 ppm or greater is assigned EPA Hazardous Waste Number D005 (Toxicity Characteristic – Barium).

## 14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	NOT REGULATED
14.2	IATA (AIR):	NOT REGULATED
14.3	IMDG (OCN):	NOT REGULATED
14.4	TDGR (Canadian GND):	NOT REGULATED
14.5	ADR/RID (EU):	NOT REGULATED
14.6	SCT (MEXICO):	NOT REGULATED
14.7	ADGR (AUS):	NOT REGULATED

## 15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.
15.2	SARA TPQ:	NA
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
15.4	CERCLA Reportable Quantity:	NA
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS Class D2B (Materials Causing Other Toxic Effects). 
15.7	State Regulatory Information:	<b>Severely Hydrotreated Naphthenic Petroleum Oil (Mineral Oil)</b> is found on the following state criteria lists: New Jersey Right-to-Know List (NJ), and Pennsylvania Right-to-Know List (PA). No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).
15.8	Other Requirements:	NA

## 16. OTHER INFORMATION

16.1	Other Information:	<b>DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAY. MAY CAUSE AN ALLERGIC SKIN REACTION.</b> Wear protective gloves/eye protection. If swallowed, immediately call a Poison Center or doctor/physician. Avoid breathing mist/sprays. If skin irritation or rash occurs: Get medical advice/attention. Store in a cool, well-ventilated place. <b>KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</b>	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Precision Brand Products, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	<b>Precision Brand Products, Inc.</b> 2250 Curtiss Street Downers Grove, IL 60515 USA Tel: +1 (630) 969-7200 Fax: +1 (630) 969-0310 <a href="http://www.precisionbrand.com">http://www.precisionbrand.com</a>	
16.5	Prepared by:	<b>ShipMate, Inc.</b> P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 <a href="http://www.shipmate.com">http://www.shipmate.com</a>	

## DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

### GENERAL INFORMATION:

<b>CAS No.</b>	Chemical Abstract Service Number
<b>RTECS No.</b>	Registry of Toxic Effects of Chemical Substances Number
<b>EINECS No.</b>	European Inventory of Existing Commercial Chemical Substances Number

### EXPOSURE LIMITS IN AIR:

<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>IDLH</b>	Immediately Dangerous to Life and Health
<b>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<b>OSHA</b>	U.S. Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>STEL</b>	Short Term Exposure Limit
<b>TLV</b>	Threshold Limit Value
<b>TWA</b>	Time Weighted Average

### FIRST AID MEASURES:

<b>CPR</b>	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

### HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

<b>HEALTH</b>
<b>FLAMMABILITY</b>
<b>PHYSICAL HAZARDS</b>
<b>PERSONAL PROTECTION</b>

### PERSONAL PROTECTION RATINGS:

<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	

<b>G</b>	
<b>H</b>	
<b>I</b>	
<b>J</b>	
<b>K</b>	
<b>X</b>	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

### OTHER STANDARD ABBREVIATIONS:

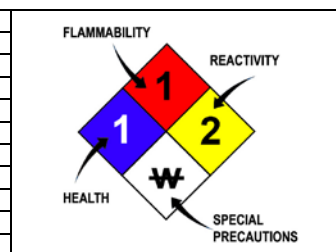
<b>Carc</b>	Carcinogenic
<b>Irrit</b>	Irritant
<b>NA</b>	Not Available
<b>NR</b>	No Results
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>Sens</b>	Sensitization
<b>STOT RE</b>	Specific Target Organ Toxicity – Repeat Exposure
<b>STOT SE</b>	Specific Target Organ Toxicity – Single Exposure

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

<b>FLAMMABILITY LIMITS IN AIR:</b>	
<b>Autoignition Temperature</b>	Minimum temperature required to initiate combustion in air with no other source of ignition
<b>LEL</b>	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
<b>UEL</b>	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

### HAZARD RATINGS:

<b>0</b>	Minimal Hazard
<b>1</b>	Slight Hazard
<b>2</b>	Moderate Hazard
<b>3</b>	Severe Hazard
<b>4</b>	Extreme Hazard
<b>ACD</b>	Acidic
<b>ALK</b>	Alkaline
<b>COR</b>	Corrosive
<b>W</b>	Use No Water
<b>OX</b>	Oxidizer
<b>TREFOIL</b>	Radioactive



### TOXICOLOGICAL INFORMATION:

<b>LD<sub>50</sub></b>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
<b>LC<sub>50</sub></b>	Lethal concentration (gases) which kills 50% of the exposed animal
<b>ppm</b>	Concentration expressed in parts of material per million parts
<b>TD<sub>10</sub></b>	Lowest dose to cause a symptom
<b>TCLo</b>	Lowest concentration to cause a symptom
<b>TD<sub>10</sub>, LD<sub>10</sub>, &amp; LD<sub>0</sub> or TC, TC<sub>0</sub>, LC<sub>10</sub>, &amp; LC<sub>0</sub></b>	Lowest dose (or concentration) to cause lethal or toxic effects
<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>BCF</b>	Bioconcentration Factor
<b>TL<sub>m</sub></b>	Median threshold limit
<b>log K<sub>OW</sub> or log K<sub>OC</sub></b>	Coefficient of Oil/Water Distribution

### REGULATORY INFORMATION:

<b>WHMIS</b>	Canadian Workplace Hazardous Material Information System
<b>DOT</b>	U.S. Department of Transportation
<b>TC</b>	Transport Canada
<b>EPA</b>	U.S. Environmental Protection Agency
<b>DSL</b>	Canadian Domestic Substance List
<b>NDSL</b>	Canadian Non-Domestic Substance List
<b>PSL</b>	Canadian Priority Substances List
<b>TSCA</b>	U.S. Toxic Substance Control Act
<b>EU</b>	European Union (European Union Directive 67/548/EEC)
<b>WGK</b>	Wassergefährdungsklassen (German Water Hazard Class)

### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

### CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment