

# SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards SDS Revision: 1.1 SDS Revision Date: 12/27/2018

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>PAUL MITCHELL THE DEMI (MUTED METALLICS)</b>
1.2	Chemical Name:	NA
1.3	Synonyms:	JPMS The Demi: Rose Gold, JPMS The Demi: Lavender, JPMS The Demi: Silver
1.4	Trade Names:	John Paul Mitchell Systems Demi Permanent Translucent Hydrating Color – Rose Gold (TDRG) John Paul Mitchell Systems Demi Permanent Translucent Hydrating Color – Lavender (TDL) John Paul Mitchell Systems Demi Permanent Translucent Hydrating Color – Silver (TDS)
1.5	Product Uses & Restrictions:	Professional Use Only
1.6	Distributor's Name:	JPMS Manufacturing, LLC
1.7	Distributor's Address:	237 Buttonwood Street, Reading, PA 19601 USA
1.8	Emergency Phone:	<b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 11977)</b>
1.9	Business Phone / Fax:	+1 (610) 374-4845 / +1(610) 373-7101

## 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). <u>Classification:</u> Skin Irrit.3; Eye Irrit. 2A; STOT SE 3	
2.2	Label Elements	<p><b>WARNING!</b> <b>CAUSES MILD SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.</b></p> <p><u>Hazard Statements</u> (H): H316 – Causes mild skin irritation. H319 – Causes serious eye irritation. H335 – May cause respiratory irritation.</p> <p><u>Precautionary Statements</u> (P): P261 – Avoid breathing mist/vapors. P271 – Use only in well-ventilated area. P280 – Wear protective gloves and eye/face protection. P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 – IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P312 – Call a POISON CENTER/doctor if you feel unwell. P332+P313 – If skin irritation occurs: get medical advice/attention. P403+P233 – Store in a well-ventilated place. Keep container tightly closed. P405 – Store locked up. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).</p>	
2.3	Additional Hazards:	<b>NOTICE:</b> This product is designed and intended for use by a licensed cosmetologist/professional hairdresser only, and carries no warranty, expressed or implied, if used by others. <b>CAN CAUSE AN ALLERGIC REACTION.</b> Preliminary patch testing is recommended. Tattoos, including black and temporary henna, may increase the risk of allergy. If a severe allergic reaction should occur, seek immediate medical attention. This product must not be used for dyeing the eyelashes or eyebrows - to do so may cause blindness.	

## 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		
AQUA (WATER/EAU)	7732-18-5	ZC0110000	231-791-2	30-60	NA	NA	NF	NF	NF	NA	NA	NA		
LAURETH-2	3055-93-4	NA	221-279-7	10-30	NA	NA	NF	NF	NF	NA	NA	NA		
	Skin Irrit. 2; Eye Dam. 1; H315, H318													
PROPYLENE GLYCOL	57-55-6	TY200000	200-338-0	10-30	NA	NA	150	474	NF	NA	NA	NA		
	Skin Irrit. 3; Eye Irrit. 2; H316, H320													
JPMS PROPRIETARY BLEND	NA	NA	NA	0-25	NA	NA	NF	NF	NF	NA	NA	NA		
OLEIC ACID	112-80-1	RG2275000	204-007-1	5-15	NA	NA	NF	NF	NF	NA	NA	NA		
	Skin Irrit. 2; H315													
ISOPROPYL ALCOHOL	67-63-0	NT8050000	200-661-7	1-5	400	500	400	500	NF	400	500	2000	400 TWA	
	Flam. Liq. 2; Skin Irrit. 3; Eye Irrit. 2A; STOT SE 3; H225, H316, H319													
STEARETH-20	9005-00-9	NA	NA	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
STEPANOL WA – EXTRA HP	NA	NA	NA	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. 4; Eye Irrit. 2A; H303, H319													
SODIUM SULFITE	7757-83-7	WE2150000	231-821-4	0-5	NA	NA	NF	NF	NF	NA	NA	NA		
FRAGRANCE (PARFUM)	NA	NA	NA	0-2	NA	NA	NF	NF	NF	NA	NA	NA		

## 3. COMPOSITION &amp; INGREDIENT INFORMATION – cont'd

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
<b>MAY ALSO CONTAIN:</b>														
p-AMINO-o-CRESOL	2835-95-2	NA	220-618-6	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
2-METHYL-5-HYDROXYETHYLAMINOPHENOL	55302-96-0	NA	259-583-7	0-11	NA	NA	NF	NF	NF	NA	NA	NA		
1-HYDROXYETHYL 4,5-DIAMINO PYRAZOLE SULFATE	155601-30-2	NA	429-300-3	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
2-AMINO-3-HYDROXYPYRIDINE	16867-03-1	NA	240-886-8	0-1	NA	NA	NF	NF	NA	NF	NF	NF		
	Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H315, H319, H335													
4-AMINO-3-NITROPHENOL	610-81-1	NA	210-236-8	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
HYDROXYETHYL-P-PHENYLENEDIAMINE SULFATE	93841-25-9	NA	298-995-1	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
2,6-DIHYDROXY-3,4-DIMETHYLPYRIDINE	84540-47-6	NA	283-141-2	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
N,N-BIS(2-HYDROXYETHYL)-P-PHENYLENEDIAMINE SULFATE	54381-16-7	NA	259-134-5	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
4-AMINO-2-HYDROXYTOLUENE	2835-95-2	NA	220-618-6	0-1	NA	NA	NF	NF	NF	NA	NA	NA		
	Skin Irrit. 2; Skin Sens. 1; eye Irrit. 2 STOT SE 3; H315, H317, H319, H335													

## 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p><b>Eyes:</b> Splashes are not likely; however, if product gets in the eyes. Remove contact lenses, if present and easy to do, flush with copious amounts of lukewarm water for at least 15 minutes. Continue rinsing. If eye irritation persists: Get medical advice/attention.</p> <p><b>Skin:</b> If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.</p> <p><b>Inhalation:</b> Remove victim to fresh air at once.</p>										
4.2	Effects of Exposure:	<p><b>Ingestion:</b> If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p><b>Eyes:</b> Irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p><b>Skin:</b> May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.</p> <p><b>Inhalation:</b> None expected.</p>										
4.3	Symptoms of Overexposure:	Overexposure in eyes may cause redness, itching and watering. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.										
4.4	Acute Health Effects:	Moderate irritation to eyes. Symptoms of overexposure may include redness, itching, stinging, irritation and watering. Moderate irritation to skin near affected areas.										
4.5	Chronic Health Effects:	No harmful or chronic health effects are expected to occur from a single accidental ingestion. Propylene Glycol, contained in very small quantities in this product may be mild allergens to some sensitive individuals.										
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).										
		<table border="1"> <tr> <td><b>HEALTH</b></td> <td><b>1</b></td> </tr> <tr> <td><b>FLAMMABILITY</b></td> <td><b>0</b></td> </tr> <tr> <td><b>PHYSICAL HAZARDS</b></td> <td><b>1</b></td> </tr> <tr> <td><b>PROTECTIVE EQUIPMENT</b></td> <td><b>B</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>0</b>	<b>PHYSICAL HAZARDS</b>	<b>1</b>	<b>PROTECTIVE EQUIPMENT</b>	<b>B</b>	<b>EYES</b>	<b>SKIN</b>
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<b>PROTECTIVE EQUIPMENT</b>	<b>B</b>											
<b>EYES</b>	<b>SKIN</b>											

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This product is not flammable.
5.2	Extinguishing Methods:	CO <sub>2</sub> , Halon (if permitted), Dry Chemical, Foam, as authorized.
5.3	Firefighting Procedures:	As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. 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. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.



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**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). Keep incompatible materials (e.g., organics such as oil) away from spill.</p> <p>For <u>small spills</u> (e.g., &lt; 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows). Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p>
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**7. HANDLING & STORAGE INFORMATION**

7.1	Work & Hygiene Practices:	Do not eat, drink, or smoke while handling this product. Wash thoroughly after handling. Avoid contact with flammable or combustible materials. Avoid contamination from any source, including metals, dust and organic materials. Keep bulk covered. Wash unintentional residues with soap and warm water.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Keep away from excessive heat and open flames. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage.
7.3	Special Precautions:	Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.

**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		
	CHEMICAL NAME(S)										
	PROPYLENE GLYCOL	NA	NA	150	474	NF	NA	NA	NA		
	ISOPROPYL ALCOHOL	400	500	400	500	NF	400	500	2000	400 TWA	
8.2	Ventilation & Engineering Controls:	When working with large quantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.									
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134, or applicable U.S. state regulations, or the appropriate standards of Canada, its provinces, E.C. member states, or Australia.									
8.4	Eye Protection:	Wear protective eyewear (e.g., safety glasses with side-shield) at all times when handling this product. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants.									
8.5	Hand Protection:	If anticipated that prolonged & repeated skin contact will occur during use of this product, wear latex or rubber gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states.									
8.6	Body Protection:	However, no special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the E.C. member states, or U.S. OSHA.									

**9. PHYSICAL & CHEMICAL PROPERTIES**

9.1	Appearance:	Liquid, color varies
9.2	Odor:	Mild, Perfumed Odor
9.3	Odor Threshold:	NA
9.4	pH:	6.60 - 8.00
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	> 60 °C (> 140 °F), ASTM D4206
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	0.976 - 1.020 g/mL
9.12	Solubility:	Soluble
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:	NA

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**10. STABILITY & REACTIVITY**

10.1	Stability:	This product is stable.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO <sub>2</sub> ) and sulfur (SO <sub>2</sub> ). Liberation of gas may result in dangerous pressure.
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Open flames, sparks and high heat, direct sunlight.
10.5	Incompatible Substances:	Store away from flammable liquids, flammable solids, aerosols and other incompatible materials (e.g., reducing materials, combustible materials, metal contamination like iron, copper their alloys). Avoid contamination. Do not store any tint, lightener lotion or bleach powder after it has been mixed with developer; the container may rupture. Never return unused material to original container. Avoid extreme heat and ignition sources.

**11. TOXICOLOGICAL INFORMATION**

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product but is not presented in this document.		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	This product contains <u>Isopropyl Alcohol</u> , which is not carcinogenic to humans, but is listed as Group 3 carcinogens by the IARC.		
11.6	Reproductive Toxicity:	This product is not reported to produce 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 4.3.		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

**12. ECOLOGICAL INFORMATION**

12.1	Environmental Stability:	The components of this product will slowly degrade over time into a variety of organic compounds. Specific environmental data available for the components of this product are as follows: <u>Isopropyl Alcohol</u> : Log K <sub>OW</sub> = 0.05-0.14. Isopropyl alcohol occurs naturally; it is generated during microbial degradation of plant and animal wastes. When released on land or water, it is apt to volatilize and biodegrade. The estimated half-life in water is 5.4 days. <u>Isopropyl Alcohol</u> is not expected to bioconcentrate.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product.

**13. DISPOSAL CONSIDERATIONS**

13.1	Waste Disposal:	Dispose of in accordance with federal, state and local regulations.
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 contains <u>Isopropanol</u> , a substance subject to SARA Title III, Section 313 reporting requirements.
15.2	SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
15.4	CERCLA Reportable Quantity (RQ):	NA
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics). This material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA.

## 15. REGULATORY INFORMATION – cont'd

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 D2B (Other Toxic Effects)	
15.7	State Regulatory Information:	<p><u>Isopropanol</u> is found on the following state criteria lists: California OSHA Hazardous Substances List (CA), Massachusetts Hazardous Substances List (MA), Michigan, Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), and Washington Permissible Exposures List (WA).</p> <p><u>Propylene Glycol</u> is found on the following state criteria list: MN and PA.</p> <p>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).</p>	
15.8	Other Requirements:	<p><u>California Proposition 65</u>: <b>WARNING!</b> This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.</p>	

## 16. OTHER INFORMATION

16.1	Other Information:	<p><b>WARNING! CAUSES MILD SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.</b> Use only as directed. Discontinue use immediately if irritation develops. Avoid breathing mist/vapors. Use only in well-ventilated area. Wear protective gloves and eye/face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. – Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: get medical advice/attention. Store in a well-ventilated place. Keep container tightly closed.</p> <p><b>KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</b></p> <p>This product is designed and intended for use by a licensed cosmetologist/professional hairdresser only, and carries no warranty expressed or implied if used by others. <b>CAN CAUSE AN ALLERGIC REACTION.</b> Preliminary patch testing is recommended. Tattoos, including black and temporary henna, may increase the risk of allergy, If a severe allergic reaction should occur, immediately seek medical attention. This product must not be used for dyeing the eyelashes or eyebrows; to do so may cause blindness.</p> <p><b>WARNING!</b> This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.</p>	
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 & JPMS Manufacturing, LLC'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:	<p><b>JPMS Manufacturing, LLC</b> 237 Buttonwood Street Reading, PA 19601 USA Tel: +1 (610) 374-4845 Fax: +1 (610) 373-7101</p>	
16.5	Prepared by:	<p><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></p>	

## 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>EXPOSURE LIMITS IN AIR:</b>	
<b>ACGIH</b>	American Conference on Governmental Industrial Hygienists
<b>C</b>	Ceiling Limit
<b>ES</b>	Exposure Standard (Australia)
<b>IDLH</b>	Immediately Dangerous to Life and Health
<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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### HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard	<div style="background-color: blue; color: white; padding: 2px;">HEALTH</div> <div style="background-color: red; color: white; padding: 2px;">FLAMMABILITY</div> <div style="background-color: yellow; color: black; padding: 2px;">PHYSICAL HAZARDS</div> <div style="background-color: black; color: white; padding: 2px;">PERSONAL PROTECTION</div>
1	Slight Hazard	
2	Moderate Hazard	
3	Severe Hazard	
4	Extreme Hazard	

### 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	Synthetic 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>ML</b>	Maximum Limit
<b>mg/m3</b>	milligrams per cubic meter
<b>NA</b>	Not Available
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>NR</b>	No Results
<b>ppm</b>	parts per million
<b>SCBA</b>	Self-Contained Breathing Apparatus

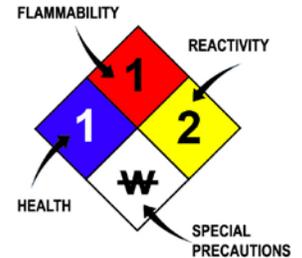
### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

#### FLAMMABILITY LIMITS IN AIR:

<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>NOHSC</b>	National Occupational Health and Safety Commission (Australia)
<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)
<b>HMIS-III</b>	National Paint & Coatings Association Hazardous Materials Identification System

### 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

### EC (67/548/EEC) INFORMATION:

C	E	F	N	O	T	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful

### 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