

# SAFETY DATA SHEET


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**MTL**

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards      SDS Revision: 1.2      SDS Revision Date: 11/29/2018

## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>3-Way Hairspray</b>
1.2	Chemical Name:	Aerosol
1.3	Synonyms:	MTL
1.4	Trade Names:	3-Way Hairspray
1.5	Product Uses & Restrictions:	Aerosol Hair Spray
1.6	Distributor's Name:	Jon Renau
1.7	Distributor's Address:	2842 Whiptail Loop, Carlsbad, CA 92010
1.8	Emergency Phone:	<b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 20108)</b>
1.9	Business Phone / Fax:	+1 (800) 462-9447

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	<p>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).</p> <p><b>WARNING! FLAMMABLE AEROSOL. PRESSURIZED CONTAINER: MAY BURST IF HEATED. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION.</b></p> <p>Classification: Aerosol 2; Skin Sens. 1B; Eye Irrit. 2</p>	
2.2	Label Elements:	<p><b>Hazard Statements (H):</b> H223 – Flammable aerosol. H229 – Pressurized container: May burst if heated. H317 – May cause an allergic skin reaction. H320 – Causes eye irritation.</p> <p><b>Precautionary Statements (P):</b> P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 – Do not spray on open flame or other ignition source. P251 – Do not pierce or burn, even after use. P261 – Avoid breathing fume/gas/mist/vapors/spray. P264 – Wash hands and exposed skin areas with soap and warm thoroughly after handling. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/eyewear. P302+P352 – IF ON SKIN: Wash with plenty warm water and soap. P333+P313 – If skin irritation or rash occurs: Get medical advice/attention. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists get medical advice/attention. P362+P364 – Take off contaminated clothing and wash it before reuse. P370+P378 – In case of fire: Use Water, Foam, CO<sub>2</sub>, Dry Chemical, Halon (if authorized), to extinguish. P403+P235 – Store in a well-ventilated place. Keep cool. P410+P412 – Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).</p>	
2.3	Other Warnings:	<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				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
ETHANOL (SD ALCOHOL 40B)	64-17-5	KQ6300000	200-578-6	30-60	1000	3000	1000	1800	NF	1000	1900	3300		
	Flam.Liq.2; H225													
DIFLUOROETHANE (R-152a)	75-37-6	KI4100000	200-866-1	30-60	1000	NA	1000	NF	NF	NA	NA	NA		
	Flam. Gas 1; H220													
ETHYL ESTER OF PVM/MA COPOLYMER	25087-06-3	NA	NA	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
VA/BUTYL MALEATE/ISOBORNYL ACRYLATE COPOLYMER	136392-68-2	NA	NA	0.1-1	NA	NA	NF	NF	NF	NA	NA	NA		
AMINOMETHYL PROPANOL	124-68-5	UA5950000	204-709-8	0.1-1	NA	NA	NF	NF	NF	NA	NA	NA		
	Eye Irrit. 2; Skin Irrit. 2; Aquatic Chronic 3; H319, H315, H412													
FRAGRANCE (PARFUM)	NA	NA	NA	0.1-1	NA	NA	NF	NF	NF	NA	NA	NA		
DIMETHYL STEARAMINE	1613-17-8	NA	216-559-0	0.1-1	NA	NA	NF	NF	NF	NA	NA	NA		
PEG/PPG-17/18 DIMETHICONE	9006-65-9	TQ2690000	NA	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		
	Eye Irrit. 2; H319													
PANTHENOL	81-13-0	NA	201-327-3	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		
GLYCERIN	56-81-5	MA8050000	200-289-5	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		
WATER (AQUA/EAU)	7732-18-5	NA	231-791-2	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		

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## 3. COMPOSITION & 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				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
PHENYL TRIMETHICONE	2116-84-9	NA	218-320-6	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		
EXTRACT	NA	NA	NA	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		

## 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, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.</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> Moderately 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.											
4.5	Chronic Health Effects:	No harmful or chronic health effects are expected to occur from a single accidental ingestion.											
4.6	Target Organs:	Eyes											
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" 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>3</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 style="background-color: #000000; color: white;"><b>PROTECTIVE EQUIPMENT</b></td> <td style="text-align: center;"><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>3</b>	<b>PHYSICAL HAZARDS</b>	<b>0</b>	<b>PROTECTIVE EQUIPMENT</b>	<b>B</b>	<b>EYES</b>	<b>SKIN</b>
<b>HEALTH</b>	<b>1</b>												
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<b>PHYSICAL HAZARDS</b>	<b>0</b>												
<b>PROTECTIVE EQUIPMENT</b>	<b>B</b>												
<b>EYES</b>	<b>SKIN</b>												

## 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	<p><b>FLAMMABLE AEROSOL.</b> Level 2 Aerosol (NFPA 30B). Aerosols may burst at temperatures above 120 °F. Cool uninvolved containers to prevent possible bursting. Aerosols may be projectile hazards when bursting. If aerosols are bursting, stay clear until bursting is complete. Containers may rupture and release flammable liquids or/ or exposed gases if exposed to the heat of fire. Keep containers cool by spraying them with water until the fire has been extinguished. Keep away from heat, lit cigarettes, sparks &amp; open flame. Keep container closed. When exposed to high temperatures, may produce hazardous decomposition products such as oxides of carbon (e.g., CO, CO<sub>2</sub>) and nitrogen (e.g., NO<sub>x</sub>) and smoke.</p>	
5.2	Extinguishing Methods:	Water, Foam, CO <sub>2</sub> , Dry Chemical, Halon (if 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).</p> <p>For <u>small spills</u> (e.g., &lt; 1 gallon (3.8 L)) or <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. 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. 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.
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.
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
		CHEMICAL NAME(S)	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		ETHANOL (SD ALCOHOL 40B)	1000	3000	1000	1800	NF	1000	1900	3300	
		DIFLUOROETHANE (R-152a)	1000	NA	1000	NF	NF	NA	NA	NA	
8.2	Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. 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:	Avoid eye contact. Protective eyewear recommended. Wear protective eyewear (e.g., safety glasses with side-shield) at all times when handling large quantities (of 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:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. 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:	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:	Aerosol. Clear liquid.
9.2	Odor:	NA
9.3	Odor Threshold:	NA
9.4	pH:	8.0 ± 0.50
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	9 °C (48 °F)
9.8	Upper/Lower Flammability Limits:	LEL: 5.1% / UEL: 17.1% (R-152A)
9.9	Vapor Pressure:	60 ± 5 psig @ 70 °F
9.10	Vapor Density:	NA
9.11	Relative Density:	0.802 ± 0.012
9.12	Solubility in Water:	NA
9.13	Partition Coefficient (log Pow):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	VOC: 54.49%; 6.68 ± 0.10 lb/gal. Percent solids: 5.0 ± 0.5

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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> ).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Open flames, sparks and high heat.
10.5	Incompatible Substances:	None known.

## 11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: YES
11.2	Toxicity Data:	The product has not been tested for specific toxicity 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 does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>		
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:	There are no specific data available for this product.
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:	Waste disposal must be in accordance with appropriate Federal, state, and local regulations.
13.2	Special Considerations:	U.S. EPA Waste Number: D001 (characteristic - ignitable).

## 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):	CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/20 UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.2	IATA (AIR):	CONSUMER COMMODITY, 9, ID8000 (IP VOL ≤ 0.5 L) UN1950, AEROSOLS, FLAMMABLE, 2.1 (IP VOL > 1.0 L)	
14.3	IMDG (OCN):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	MARK PACKAGE ("LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" ≤ 1.0 L) or UN1950, AEROSOLS, FLAMMABLE, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.5	ADR/RID (EU):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1950, AEROSOLS, 2.1 (CANT. LTDA., IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L)	

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## 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 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.
15.6	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/NDL. None of the components of this product are listed on the Priorities Substances List. WHMIS B5, D2B (Flammable Aerosol, Other Toxic Effects) 
15.7	State Regulatory Information:	<u>Ethanol</u> is found on the following state criteria lists: Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), Pennsylvania Right-to-Know List (PA), California Proposition 65 ((CA65) ethanol in alcoholic beverages) and Washington Permissible Exposures List (WA). <u>Difluoroethane</u> can be found on the following state criteria lists: MA and NJ. 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:	This product does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## 16. OTHER INFORMATION

16.1	Other Information:	<b>WARNING! FLAMMABLE AEROSOL. PRESSURIZED CONTAINER: MAY BURST IF HEATED. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION.</b> Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing fume/gas/mist/vapours/spray. Wash hands and exposed skin areas with soap and warm thoroughly after handling. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty warm water and soap. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention. In case of fire: Use Water, Foam, CO <sub>2</sub> , Dry Chemical, Halon (if authorized) to extinguish. Store in a well-ventilated place. Keep cool. Use only as directed. Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F). Discontinue use immediately if irritation develops. <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 & Shield Packaging of CA'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, EXPRESSED OR IMPLIED, ARE PROVIDED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. 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:	Jon Renau 2842 Whiptail Loop, Carlsbad, CA 92010  Tel: +1 (800) 462-9447	
16.5	Prepared by:	ShipMate, Inc. 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>	 ShipMate® Dangerous Goods Training & Consulting

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## 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:

<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>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

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>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