



## 1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	<b>DEOXIT® D-SERIES, 5% SOLUTION, (PN D5L-A), VOC COMPLIANT</b>
1.2	Chemical Name:	NA
1.3	Synonyms:	<b>DeoxIT® D-Series D5L (5% Liquids) PART NOS:</b>  Part No. D5L-25CA (25 mL);                      Part No. D5L-4A (118 mL);                      Part No. D5L-12A (354 mL); Part No. D5L-32A (944 mL);                      Part No. D5L-5GA (30 L);                      Part No. D5L-55GA (55 gallon)
1.4	Trade Names:	DeoxIT® D-Series; D5L-A 5% Liquid
1.5	Product Use:	Electronics Cleaner, Deoxidize and improve electrical contacts & connectors.
1.6	Distributor's Name:	CAIG Laboratories, Inc.
1.7	Distributor's Address:	12200 Thatcher Court, Poway, CA 92064-6876 USA
1.8	Emergency Phone:	<b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN205206)</b>
1.9	Business Phone / Fax:	+1 (800) 224-4123

## 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! FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION.</b> Classification: Flam. Liq. 3, Eye Irrit. 2, Skin Sens. 1B	
2.2	Label Elements:	<b>Hazard Statements (H):</b> H226 – Flammable liquid and vapor. H317 – May cause an allergic skin reaction. H320 – Causes eye irritation. <b>Precautionary Statements (P):</b> P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 – Keep container tightly closed. P243 – Take action to prevent static discharges. P261 – Avoid breathing fume/mist/vapors/spray. P264 – Wash hands and exposed skin areas with soap and warm water thoroughly after handling. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/eye protection/face protection. P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower). P321 – For specific treatment, see Section 4 of this Safety Data Sheet. P331 – Do NOT induce vomiting. 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. P362+P364 – Take off contaminated clothing and was it before reuse. P337+P313 – If eye irritation persists: Get medical advice/attention. P370+P378 – In case of fire: Use CO <sub>2</sub> , dry chemical, foam to extinguish. P403+P235 – Store in a well-ventilated place. Keep cool. P501 - Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).	 
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				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
PETROLEUM NAPHTHA	64742-88-7	XS5250000	265-191-7	60-100	100	NA	100	NF	NF	NF	NA	NA	NA	
	REACH Reg. No. 02678590001; Flam. Liq. 3, Asp. Tox. 1, STOT RE1, Eye Irrit. 2, Skin Sens. 1B													
METHYL NONAFLUORO-BUTYL ETHER	163702-07-6	NA	NA	10-30	750	NA	NF	NF	NF	NA	NA	NA	SKIN	
	REACH Reg. No.:01-0000016878-53													
METHYL NONAFLUORO-ISOBUTYL ETHER	163702-08-7	NA	NA	10-30	750	NA	NF	NF	NF	NA	NA	NA	SKIN	
	REACH Reg. No.:01-0000016878-53													
DEOXIT ® D100L (TRADE SECRET)	NA	NA	NA	1-5	NA	NA	NF	NF	NF	15	NA	NA		
	REACH Reg. No. Non-hazardous/Proprietary													

## 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b>    <b>DO NOT INDUCE VOMITING.</b> Contact ChemTrec at +1 (703) 527-3887 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>            Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention.</p> <p><b>Skin:</b>             Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><b>Inhalation:</b>      Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.</p>
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# SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards      SDS Revision: 7.2      SDS Revision Date: 2/1/2018

4.2	Effects of Exposure:	<p><u>Ingestion:</u> If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p><u>Eyes:</u> This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists.</p> <p><u>Skin:</u> This product can cause mild, transient skin irritation with short-term exposure.</p> <p><u>Inhalation:</u> Exposure may cause respiratory tract irritation in some sensitive individuals.</p>
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## 4. FIRST AID MEASURES – cont'd

4.3	Symptoms of Overexposure:	<p><u>Ingestion:</u> Nausea, intestinal discomfort, vomiting and/or diarrhea.</p> <p><u>Eyes:</u> Overexposure in eyes may cause redness, itching and watering (risk of serious damage to eyes). Contact may cause serious eye irritation including stinging, watering, redness.</p> <p><u>Skin:</u> Prolonged contact with skin may result in bleaching and irritation of skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals. Symptoms of skin overexposure may include redness, itching, and irritation of affected areas.</p>															
4.4	Acute Health Effects:	Moderate irritation to eyes. Moderate irritation to skin near affected areas. Acute health hazards may be delayed. Most common symptoms include irritating properties to eyes, respiratory system and skin.															
4.5	Chronic Health Effects:	No harmful or chronic health effects are expected to occur from a single accidental ingestion. These ingredients may be irritating to skin and mucous membrane of the eye and respiratory system. Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic 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) or impaired kidney function may be more susceptible to the effects of this substance.															
		<table border="1"> <tr> <td colspan="2"><b>HEALTH</b></td> <td><b>1</b></td> </tr> <tr> <td colspan="2"><b>FLAMMABILITY</b></td> <td><b>2</b></td> </tr> <tr> <td colspan="2"><b>PHYSICAL HAZARDS</b></td> <td><b>0</b></td> </tr> <tr> <td colspan="2"><b>PROTECTIVE EQUIPMENT</b></td> <td><b>B</b></td> </tr> <tr> <td><b>EYES</b></td> <td><b>SKIN</b></td> <td></td> </tr> </table>	<b>HEALTH</b>		<b>1</b>	<b>FLAMMABILITY</b>		<b>2</b>	<b>PHYSICAL HAZARDS</b>		<b>0</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 material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point. Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and nitrogen. Also, depending upon the conditions of use, low concentrations of hydrogen sulfide can be released.	
5.2	Extinguishing Methods:	Dry Chemical, Foam, Carbon Dioxide, and Water Fog.	
5.3	Firefighting Procedures:	Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boil over. 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.	




## 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.</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 drains, municipal sewers and open bodies of water.</p>
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## 7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Use normal hygiene practices. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking. Good personal hygiene practices, such as washing any skin contact areas and removing contaminated clothing, are recommended.
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. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.
7.3	Special Precautions:	Clean all spills promptly. Spilled material may present a slipping hazard. Follow all instructions on product label. Keep container closed when not in use. Keep this and all chemicals out of reach of children.

## 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	
		PETROLEUM NAPHTHA	100	NA	100	NF	NF	NA	NA	NA	
		METHYL NONAFLUORO-BUTYL ETHER	750	NA	NF	NF	NF	NA	NA	NA	SKIN
		METHYL NONAFLUORO-ISOBUTYL ETHER	750	NA	NF	NF	NF	NA	NA	NA	SKIN
		DEOXIT ® D100L (TRADE SECRET)	NA	NA	NF	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 appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).									
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where mist or vapors 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:	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. Wear goggles and/or face shield if splashing or spraying is anticipated. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants. Have suitable eye wash water available. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).									
8.5	Hand Protection:	Use gloves constructed of chemical-resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, or the EU member states.									
8.6	Body Protection:	Avoid prolonged and/or repeated skin contact. Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing should include long-sleeves, apron, boots and additional facial protection. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA.									

## 9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Light red liquid
9.2	Odor:	Ethereal / hydrocarbon odor
9.3	Odor Threshold:	NA
9.4	pH:	NA
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	171.1-204 °C @ 760 mm Hg
9.7	Flashpoint:	48.8-54.4 °C (120-130 °F)
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	35 psig @ 20 °C; 50 psig @ 50 °C
9.10	Vapor Density:	NA
9.11	Relative Density:	0.75
9.12	Solubility:	Insoluble
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	10.0 cPs
9.17	Other Information:	VOC 588 g/L

## 10. STABILITY & REACTIVITY

10.1	Stability:	Stable under normal conditions of use.
10.2	Hazardous Decomposition Products:	Oxides of carbon (CO, CO <sub>2</sub> ).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Open flames, sparks, high heat, incompatible substances and direct sunlight, incompatible substances and heavily trafficked areas.
10.5	Incompatible Substances:	Avoid extreme heat and ignition sources. Store away from oxidizers, strong acids and bases.

## 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 and is not presented in this document.		
11.3	Acute Toxicity:	Moderate irritation to eyes and skin near affected areas.		
11.4	Chronic Toxicity:	This material may aggravate any pre-existing skin condition (e.g., dermatitis).		
11.5	Suspected Carcinogen:	This product does not contain any chemicals known to the State of California to cause cancer 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 4.2		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

## 12. ECOLOGICAL INFORMATION










12.1	Environmental Stability:	There is 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:	Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.
13.2	Special Considerations:	U.S. EPA RCRA Hazardous Waste: D001 (characteristic – ignitability)

## 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 PER 49 CFR 173.150(f)	
14.2	IATA (AIR):	ID8000 CONSUMER COMMODITY, 9 (IP VOL ≤ 0.5 L); or UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (LTD QTY, IP VOL ≤ 0.5 L)	  or 
14.3	IMDG (OCN):	UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (LTD QTY, IP VOL ≤ 5.0 L)	
14.4	TDGR (Canadian GND):	MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" or UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III (LTD QTY, IP VOL ≤ 5.0 L)	
14.5	ADR/RID (EU):	UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III (LTD QTY, IP VOL ≤ 5.0 L)	
14.6	SCT (MEXICO):	UN1268, DESTILADO DEL PETROLEO, N.E.P., 3, III (CANT. LTDA., IP VOL ≤ 5.0 L)	
14.7	ADGR (AUS):	UN1268 PETROLEUM DISTILLATES, N.O.S., 3, III (LTD QTY, IP VOL ≤ 5.0 L)	

## 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:	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:	NA
15.5	Other Federal Requirements:	None of the ingredients are listed as Hazardous Air Pollutants (HAPs). None of the ingredients are listed as Toxic Pollutants under the Clean Water Act (CWA). None of the ingredients are listed as Priority Pollutants under the Clean Water Act (CWA). This product does not contain any Class 1 or Class 2 ozone depleters.
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the SDS 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 B3, D2B (Combustible Liquid, Other Toxic Effects).





# SAFETY DATA SHEET

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, GHS & 1272/2008/EC Standards



SDS Revision: 7.2

SDS Revision Date: 2/1/2018

## 15. REGULATORY INFORMATION – cont'd

15.7	State Regulatory Information:	No 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). This product <u>does not</u> 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> .
15.8	Other Requirements:	NA

## 16. OTHER INFORMATION

16.1	Other Information:	<b>WARNING! FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION.</b> Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Take action to prevent static discharges. Avoid breathing fume/mist/vapors/spray. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower). For specific treatment, see Section 4 of this Safety Data Sheet. Do NOT induce vomiting. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and was it before reuse. If eye irritation persists: Get medical advice/attention. In case of fire: Use CO <sub>2</sub> , dry chemical, foam to extinguish. Store in a well-ventilated place. Keep cool. <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 & CAIG Laboratories, 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>CAIG Laboratories, Inc.</b> 12200 Thatcher Court Poway, CA 92064-6876 Tel: +1 (800) CAIG-123 (244-4123) Fax: +1 (858) 486-8398 fax <a href="http://www.caig.com/">http://www.caig.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:

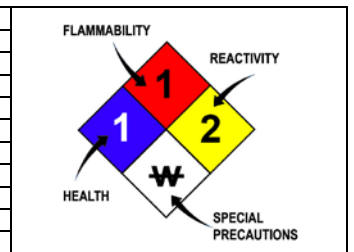
<b>Carc</b>	Carcinogenic
<b>Irrit</b>	Irritant
<b>NA</b>	Not Available
<b>NR</b>	No Results
<b>ND</b>	Not Determined
<b>NE</b>	Not Established
<b>NF</b>	Not Found
<b>SCBA</b>	Self-Contained Breathing Apparatus
<b>Sens</b>	Sensitization
<b>STOT RE</b>	Specific Target Organ Toxicity – Repeat Exposure
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