## 1. PRODUCT & COMPANY IDENTIFICATION

| | | |
|---|---|---|
| 1.1 | Product Name: | **DEOXIT® D-SERIES, 5% SPRAY, (P/N D5S-6), 142 grams, VOC Compliant** |
| 1.2 | Chemical Name: | NA |
| 1.3 | Synonyms: | DeoxIT® D Series, 5% Spray; PN D5S-6 |
| 1.4 | Trade Names: | DeoxIT® D Series, 5% Spray; PN D5S-6 |
| 1.5 | Product Uses & Restrictions: | Clean, deoxidize & 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: | **CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX)** |
| 1.9 | Business Phone / Fax: | +1 (800) 224-4123 |

## 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).
**DANGER! PRESSURIZED CONATINER; MAY BURST IF HEATED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.**
Classification: Aerosols 1
Hazard Statements (H): H229 – Pressurized container; may burst if heated. H304 – May be fatal if swallowed and enters airways.
Precautionary Statements (P): P210 – Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P251 – Do not pierce or burn, even after useP301+P310 – IF SWALLOWED: Immediately call a POISON CENTER/doctor. P332+P313 – If skin irritation occurs: get medical advice/attention. P405 – Store locked up. . P410+P412 – Protect from sunlight. Do not expose to temperatures exceeding 50 ºC / 122 ºF. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).

## 3. COMPOSITION & INGREDIENT INFORMATION

| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | EXPOSURE LIMITS IN AIR (mg/m³) ACGIH ppm TLV | ACGIH ppm STEL | NOHSC ppm ES-TWA | NOHSC ppm ES-STEL | NOHSC ppm ES-PEAK | OSHA ppm PEL | OSHA ppm STEL | OSHA ppm IDLH | OTHER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PETROLEUM NAPTHA | 64742-88-7 | XS5250000 | 265-191-7 | 40-70 | 100 | NA | 100 | NF | NF | NA | NA | NA | |
| | Asp. Tox. 1; H304 | | | | | | | | | | | | |
| DIFLUORETHANE (R-152A) | 75-37-6 | K14100000 | 200-866-1 | 10-30 | 1000 | NA | 1000 | NF | NF | NA | NA | NA | SKIN |
| | Flam. Gas 1; Liq. Gas;H220, H280 | | | | | | | | | | | | |
| DEOXIT® D-SERIES, D100L | PROPRIETARY – TRADE SECRET | | | 3-7 | NA | NA | NF | NF | NF | NA | NA | NA | |

## 4. FIRST AID MEASURES

4.1 First Aid:

Ingestion: 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.

Eyes: Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally. If irritation persist repeat flushing. Get medical attention.

Skin: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, be gently warming affected area. If irritation, redness or swelling persists, contact a physician immediately.

Inhalation: Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.

4.2 Effects of Exposure:

Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.

Eyes: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.

Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.

Inhalation: None expected.

4.3 Symptoms of Overexposure:

Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea.

Eyes: Overexposure in eyes may cause redness, itching and watering.

Skin: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.

4.4 Acute Health Effects:

Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Frostbite like effect to skin.

## 4. FIRST AID MEASURES – cont'd

| | | |
|---|---|---|
| 4.5 | Chronic Health Effects: | 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). |

| | |
|---|---|
| **HEALTH** | **1** |
| **FLAMMABILITY** | **2** |
| **PHYSICAL HAZARDS** | **0** |
| **PROTECTIVE EQUIPMENT** | **B** |

**EYES** **SKIN**

## 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| 5.1 | Fire & Explosion Hazards: | Level 3 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. This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, Hydrogen Fluoride). |
| 5.2 | Extinguishing Methods: | Water, Foam, $CO_2$, Dry Chemical. Use water spray to cool unopened containers. |
| 5.3 | Firefighting Procedures: | Fight fires as for surrounding materials. 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. 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: | Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills.<br>Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container.<br>Large Spills: 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. |

## 7. HANDLING & STORAGE INFORMATION

| | | |
|---|---|---|
| 7.1 | Work & Hygiene Practices: | Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. 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) 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. |

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 Exposure Limits: ppm ($mg/m^3$)

| | ACGIH | | NOHSC | | | OSHA | | | OTHER |
|---|---|---|---|---|---|---|---|---|---|
| **CHEMICAL NAME(S)** | **TLV** | **STEL** | **ES-TWA** | **ES-STEL** | **ES-PEAK** | **PEL** | **STEL** | **IDLH** | |
| PETROLEUM NAPTHA | 100 | NA | 100 | NF | NF | NA | NA | NA | |
| DIFLUORETHANE (R-152A) | 1000 | NA | 1000 | NF | NF | NA | NA | NA | SKIN |
| DEOXIT® D-SERIES, D100L | NA | NA | NF | NF | NF | 15 | 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 dusts 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: | Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product. |

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| 8.5 | Hand Protection: | None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves. |  |
| 8.6 | Body Protection: | No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water. | |

## 9. PHYSICAL & CHEMICAL PROPERTIES

| | | |
|---|---|---|
| 9.1 | Appearance: | Light red aerosol spray/mist |
| 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 ºC @ 760 mm Hg |
| 9.7 | Flashpoint: | 48.8 – 54.4ºC (120 - 130 ºF) |
| 9.8 | Upper/Lower Flammability Limits: | NA |
| 9.9 | Vapor Pressure: | NA |
| 9.10 | Vapor Density: | 4.9 (air = 1.0) |
| 9.11 | Relative Density: | 0.75 |
| 9.12 | Solubility: | Not soluble in water |
| 9.13 | Partition Coefficient (log $P_{ow}$): | 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; unstable with heat or contamination. |
| 10.2 | Hazardous Decomposition Products: | Change in color signifies exposure to ultraviolet light or exceeding shelf life. Will not degrade to unstable products. Discard solution. |
| 10.3 | Hazardous Polymerization: | Will not occur. |
| 10.4 | Conditions to Avoid: | Open flames, sparks, high heat, incompatible substances and direct sunlight. |
| 10.5 | Incompatible Substances: | Avoid extreme heat and ignition sources. Store away from oxidizers. |

## 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. | | | | | |
| 11.3 | Acute Toxicity: | Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. | | | | | |
| 11.4 | Chronic Toxicity: | This material may aggravate any pre-existing skin condition (e.g., dermatitis). | | | | | |
| 11.5 | Suspected Carcinogen: | No. | | | | | |
| 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: | The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. | | | | | |
| 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; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. |

## 13. DISPOSAL CONSIDERATIONS

| | | |
|---|---|---|
| 13.1 | Waste Disposal: | Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). 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: | California Waste Code: 331 |

## 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): | UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L); or<br>CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/2020 |
| 14.2 | IATA (AIR): | UN1950, AEROSOLS, FLAMMABLE, 2.1 (LTD QTY, IP VOL ≤ 0.5 L); or<br>ID8000, CONSUMER COMMODITY, ORM-D (IP VOL ≤ 0.5 L) |
| 14.3 | IMDG (OCN): | UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L) |
| 14.4 | TDGR (Canadian GND): | UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L);<br>or MARK PACKAGE "LIMITED QUANTITY," "LTD QTY," or "QUANT LTÉE" or "QUANTITÉ LIMITÉE" |
| 14.5 | ADR/RID (EU): | UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 L) |
| 14.6 | SCT (MEXICO): | UN1950, AEROSOLES, 2.1 (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L) |
| 14.7 | ADGR (AUS): | UN1950, AEROSOLS, 2.1 (LTD QTY, IP VOL ≤ 1.0 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 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). |
| 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 B5 (Flammable Aerosol) |
| 15.7 | State Regulatory Information: | Difluoroethane can be found on the following state criteria lists: MA and NJ.<br>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). |
| 15.8 | Other Requirements: | The primary components of this product are listed in Annex I of EU Directive 67/548/EEC:<br>Petroleum Naphtha: Flammable, Harmful (F, Xn). Risk Phrases (R): 10-65 – Flammable. Harmful: may cause lung damage if swallowed. Safety Phrases (S): 2-23-24-62 – Keep away from children. Do not breathe gas, fumes, vapor or spray. Avoid contact with skin. If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS or the container label. WARNING! Flammable aerosol. Colorless, volatile liquid with ethereal and faint sweetish odor. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces.<br>MAL-KODE (DK): 1-3 |

## 16. OTHER INFORMATION

| | | | |
|---|---|---|---|
| 16.1 | Other Information: | **DANGER! PRESSURIZED CONATINER; MAY BURST IF HEATED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.** Use only as directed. Keep out of reach of children. Do not breathe fumes/spray. May cause lung damage if swallowed. Avoid contact with skin. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). If skin irritation occurs: get medical advice/attention. **KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.** | |
| 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: | **CAIG Laboratories, Inc.**<br>12200 Thatcher Court<br>Poway, CA 92064-6876<br>Tel: +1 (800) CAIG-123 (244-4123)<br>Fax: +1 (858) 486-8398 fax<br>http://www.caig.com/ | CAIG LABORATORIES, INC. |
| 16.5 | Prepared by: | **ShipMate, Inc.**<br>P.O. Box 787<br>Sisters, Oregon 97759-0787 USA<br>Tel: +1 (310) 370-3600<br>Fax: +1 (310) 370-5700<br>http://www.shipmate.com | ShipMate® Dangerous Goods Training & Consulting |

## 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:

| | |
|---|---|
| **CAS No.** | Chemical Abstract Service Number |

### EXPOSURE LIMITS IN AIR:

| | |
|---|---|
| **ACGIH** | American Conference on Governmental Industrial Hygienists |
| **C** | Ceiling Limit |
| **ES** | Exposure Standard (Australia) |
| **IDLH** | Immediately Dangerous to Life and Health |
| **OSHA** | U.S. Occupational Safety and Health Administration |
| **PEL** | Permissible Exposure Limit |
| **STEL** | Short-Term Exposure Limit |
| **TLV** | Threshold Limit Value |
| **TWA** | Time Weighted Average |

### FIRST AID MEASURES:

| | |
|---|---|
| **CPR** | 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. |

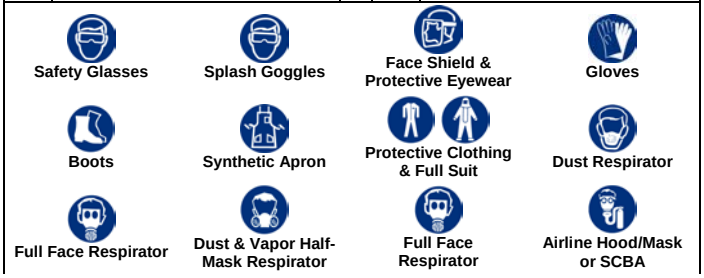
### HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

| | |
|---|---|
| **0** | Minimal Hazard |
| **1** | Slight Hazard |
| **2** | Moderate Hazard |
| **3** | Severe Hazard |
| **4** | Extreme Hazard |

**HEALTH**
**FLAMMABILITY**
**PHYSICAL HAZARDS**
**PERSONAL PROTECTION**

### PERSONAL PROTECTION RATINGS:

| | | | |
|---|---|---|---|
| **A** | | **G** | |
| **B** | | **H** | |
| **C** | | **I** | |
| **D** | | **J** | |
| **E** | | **K** | |
| **F** | | **X** | **Consult your supervisor or SOPs for special handling directions.** |




### OTHER STANDARD ABBREVIATIONS:

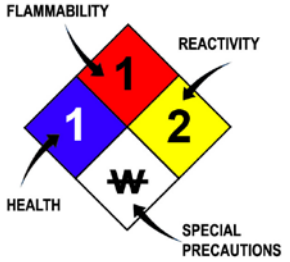
| | |
|---|---|
| **ML** | Maximum Limit |
| **mg/m3** | milligrams per cubic meter |
| **NA** | Not Available |
| **ND** | Not Determined |
| **NE** | Not Established |
| **NF** | Not Found |
| **NR** | No Results |
| **ppm** | parts per million |
| **SCBA** | Self-Contained Breathing Apparatus |

### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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

| | |
|---|---|
| **0** | Minimal Hazard |
| **1** | Slight Hazard |
| **2** | Moderate Hazard |
| **3** | Severe Hazard |
| **4** | Extreme Hazard |
| **ACD** | Acidic |
| **ALK** | Alkaline |
| **COR** | Corrosive |
| **W** | Use No Water |
| **OX** | Oxidizer |
| **TREFOIL** | Radioactive |




### TOXICOLOGICAL INFORMATION:

| | |
|---|---|
| **$LD_{50}$** | Lethal Dose (solids & liquids) which kills 50% of the exposed animals |
| **$LC_{50}$** | Lethal concentration (gases) which kills 50% of the exposed animal |
| **ppm** | Concentration expressed in parts of material per million parts |
| **$TD_{lo}$** | Lowest dose to cause a symptom |
| **TCLo** | Lowest concentration to cause a symptom |
| **$TD_{lo}$, $LD_{lo}$, & $LD_o$ or TC, $TC_o$, $LC_{lo}$, & $LC_o$** | Lowest dose (or concentration) to cause lethal or toxic effects |
| **IARC** | International Agency for Research on Cancer |
| **NTP** | National Toxicology Program |
| **RTECS** | Registry of Toxic Effects of Chemical Substances |
| **BCF** | Bioconcentration Factor |
| **$TL_m$** | Median threshold limit |
| **log $K_{OW}$ or log $K_{OC}$** | Coefficient of Oil/Water Distribution |

### REGULATORY INFORMATION:

| | |
|---|---|
| **WHMIS** | Canadian Workplace Hazardous Material Information System |
| **DOT** | U.S. Department of Transportation |
| **TC** | Transport Canada |
| **EPA** | U.S. Environmental Protection Agency |
| **DSL** | Canadian Domestic Substance List |
| **NOHSC** | National Occupational Health and Safety Commission (Australia) |
| **NDSL** | Canadian Non-Domestic Substance List |
| **PSL** | Canadian Priority Substances List |
| **TSCA** | U.S. Toxic Substance Control Act |
| **EU** | European Union (European Union Directive 67/548/EEC) |
| **WGK** | Wassergefährdungsklassen (German Water Hazard Class) |
| **HMIS-III** | National Paint & Coatings Association Hazardous Materials Identification System |

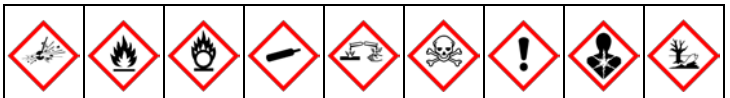
### WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

| 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 |