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MSDS-194

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards

MSDS Revision: 3.0

MSDS Revision Date: 11/24/2008

| | 1. PRODUCT IDENTIFICATION |
|-----|--|
| 1.1 | Product Name: OPI NAIL ENVY – MAINTENANCE FORMULA |
| | |
| 1.2 | Chemical Name: SOLVENT MIXTURE |
| 1.3 | Synonyms: |
| 1.4 | NA Trade Names: |
| 1.4 | NTT141G |
| 1.5 | Product Use: COSMETIC USE ONLY |
| 1.6 | Manufacturer's Name: |
| | OPI PRODUCTS, INC. |
| 1.7 | |
| 1.8 | 13034 SATICOY STREET, NO. HOLLYWOOD, CA 91605 USA Emergency Phone: |
| | CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 |
| 1.9 | Business Phone: |
| | +1 (818) 759-2400 / +1 (800)-341-9999 |
| | |
| | 2. HAZARD 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). Flammable liquid. In case of eye contact, rinse immediately with water. For external use only. Keep out of reach of children. Use only as directed. |
| 2.2 | Routes of Entry: Inhalation: YES Absorption: YES Ingestion: YES |
| 2.3 | Effects of Exposure: INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression. SKIN & EYES: Irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering. May be irritating to skin in some sensitive individuals, especially after prolonged and/or repeated contact. INHALATION: Vapors of this product may be slightly irritating to the nose, throat and other tissues of the respiratory system. Symptoms of overexposure can include coughing, wheezing, nasal congestion, and difficulty breathing. Inhalation of vapors exceeding the levels listed in Section 2 (Composition and Ingredient Information) can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea). |
| 2.4 | Symptoms of Overexposure: |
| | Symptoms of skin overexposure in individuals may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering. |
| 2.5 | Acute Health Effects: |
| | Mild to moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. |
| 2.6 | Chronic Health Effects: |
| 2.7 | None known. Target Organs: |
| 2.1 | Eyes, skin and respiratory system. |
| | |
| | |

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. Note: All WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

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MATERIAL SAFETY DATA SHEET

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| | <u> </u> | | | | | | | | ANTS IN | | na/m | 3) | |
| | | | | | ACC | SIH | | NOHSC | | OSHA | | | |
| | | | | | pp | - | ppm | | | | ppm | | OTHER |
| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | TLV | STEL | ES- TWA | ES- STEL | ES- PEAK | TLV | STEL | IDLH | |
| ETHYL ACETATE | 141-78-6 | AH5425000 | 201-550-6 | ≤ 30.0 | 400 | NE | 720 | 1440 | NF | 400 | NE | 2000 | 400 TWA |
| BUTYL ACETATE | 123-86-4 | AF7350000 | 204-658-1 | ≤ 25.0 | 150 | 200 | 730 | 950 | NF | 200 | 200 | 1700 | 150 TWA |
| NITROCELLULOSE | 9004-70-0 | QW0970000 | NA | ≤ 15.0 | (10) | NE | NF | NF | NF | (10) | NE | NE | |
| PROPYL ACETATE | 109-60-4 | AJ3675000 | 203-686-1 | ≤ 15.0 | 200 | 250 | 835 | 1040 | NF | 200 | 840 | 1700 | |
| TOSYLAMIDE/FORMALDEHYDE RESIN | 1338-51-8 | NA | NA | ≤ 10.0 | NA | NA | NF | NF | NF | NA | NA | NA | |
| ISOPROPYL ALCOHOL | 67-63-0 | NT8050000 | 200-661-7 | ≤ 10.0 | 400 | 500 | 983 | 1230 | NF | 400 | 500 | 2000 | 400 TWA |
| TRIMETHYL PENTANYL DIISOBUTYRATE | 6846-50-0 | SA142000 | 229-937-9 | ≤ 5.0 | NA | NA | NF | NF | NF | NA | NA | NA | |
| TRIPHENYL PHOSPHATE | 115-86-6 | TC8400000 | NA | ≤ 5.0 | 3 | NA | 3 | NF | NF | 3 | NA | NA | |
| ETHYL TOSYLAMIDE | 1077-56-1 | NA | 214-073-3 | ≤ 2.0 | NA | NA | NF | NF | NF | NA | NA | NA | |
| CAMPHOR | 76-22-2 | EX1225000 | 200-945-0 | ≤ 2.0 | (2) | NA | 12 | 19 | NF | (2) | NA | NA | |
| STEARALKONIUM BENTONITE | 71011-24-0 | NA | NA | ≤ 1.0 | NA | NA | NF | NF | NF | NA | NA | 15 | DUST |
| DIACETONE ALCOHOL | 123-42-2 | SA9100000 | NA | < 1.0 | 50 | 240 | 238 | NF | NF | 20 | 240 | 1800 | |
| STEARALKONIUM HECTORITE | 94891-33-5 | NA | NA | < 1.0 | NA | NA | NF | NF | NF | NA | NA | NA | |
| BUTYL ALCOHOL | 71-36-3 | NA | 200-751-6 | < 1.0 | 50 | NA | 50 | NF | 152 | 100 | NA | NA | |
| METHYLENE GLYCOL (HYDRATED FORMALDEHYDE) | 463-57-0 | TY200000 | 207-339-5 | ≤ 1.0 | NA | NA | NF | NF | NF | NA | NA | NA | |
| BENZOPHENONE-1 | 131-56-6 | DJ0700000 | 205-029-4 | < 0.1 | NE | NE | NF | NF | NF | NE | NE | NE | |
| | 77-92-9 | GE7350000 | 201-069-1 | < 0.1 | NE | NE | NF | NF | NF | NE | NE | NE | |
| CI 77891 (TITANIUM DIOXIDE) | 13463-67-7 | XR2275000 | 236-675-5 | < 0.1 | 10 | NA | NF | NF | NF | 1 | NA | NA | DUST |
| DIMETHICONE | 9006-65-9 | NA | 63148-62-9 | < 0.1 | NA | NA | NF | NF | NF | NA | NA | NA | |
| CALCIUM PANTOTHENATE | 137-08-6 | FU4375000 | 205-278-9 | < 0.1 | NA | NA | NF | NF | NF | NA | NA | NA | |
| HYDROLYZED WHEAT PROTEIN | 94350-06-8 | NA | NA | < 0.1 | NA | NA | NF | NF | NF | NA | NA | NA | |
| CI 77491 (RED IRON) | 1309-37-1 | NO740000 | 215-168-2 | < 0.1 | 15 | NA | 5 | NF | NF | 10 | NA | NA | FUME |
| CI 19140 (YELLOW 5) | 1934-21-0 | UQ6400000 | 217-699-5 | < 0.1 | NA | NA | NF | NF | NF | NF | NA | NA | |
| CI 77499 (BLACK IRON OXIDE) | 1317-61-9 | NA | 215-277-5 | < 0.1 | NA | NA | NF | NF | NF | NA | NA | NA | |

4. FIRST AID MEASURES

| | | 4. TIKST AID MEASURES | | | | | | |
|-----|-------------|--|----------------|---------------|---------------|---------------|--|--|
| 4.1 | First Aid: | | | | | | | |
| | INGESTION: | If ingested, do not induce vomiting. If product has been swallowed, patient is vomiting, continue to offer water or milk. Never give wate nearest Poison Control Center or local emergency number. Provide ingested and the amount of the substance that was swallowed. | r or milk to o | an unconsci | ious person. | Contact the | | |
| | EYES: | Splashes are not likely; however, if product gets in the eyes, flush with minutes. If irritation occurs, contact a physician. | copious amo | ounts of luke | warm water fo | r at least 15 | | |
| | SKIN: | If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the effected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately. | | | | | | |
| | INHALATION: | Remove victim to fresh air at once. | | | | | | |
| 4.2 | | is Aggravated by Exposure: | HEALTH | 4 | | 1 | | |
| | None known. | | FLAMM | ABILITY | | 3 | | |
| | | | REACTIVITY | | | 0 | | |
| | | | PROTE | CTIVE EG | QUIPMENT | Α | | |
| | | | | | | | | |

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| | | |
| | 5. FIREFIGHTING MEASURES | |
| 5.1 | Flashpoint & Method: -4 °C (24 °F) estimated. | |
| 5.2 | Autoignition Temperature: | |
| | NA | |
| 5.3 | Flammability Limits: Lower Explosive Limit (LEL): NE Upper Explosive Limit (UEL) | NE |
| 5.4 | Fire & Explosion Hazards: WARNING: Flammable! Keep away from heat, lit cigarettes, sparks & open flame. Keep container closed. | |
| 5.5 | Extinguishing Methods: | |
| | CO ₂ , Halon, Dry Chemical, Foam | |
| 5.6 | Firefighting Procedures: | |
| | decompose to produce carbon oxides. Vapors of this product are heavier than air and may travel to a source of ignition and flash back to a leaking or open container. First responders should wear eye protection. Structural firefighters must wear SCBAs and full protective equipment. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving this product. HAZCHEM CODE: 3YE | |
| | 6. ACCIDENTAL RELEASE MEASURES | |
| 6.1 | Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equ | inment |
| | For small spills (e.g., <1 gallon) wear appropriate personal protective equipment (e.g., goggles, gloves). Maxim doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and pl closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wa and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thorous For spills ≥ 1 gallon, deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap a and cleaning runoffs out of municipal sewers and open bodies of water. | ize ventilation (open ace into appropriate sh all affected areas ghly before reuse. or earth). Use ONLY material to separate |
| | | |
| | 7. HANDLING & STORAGE INFORMATION | |
| 7.1 | Work & Hygiene Practices: | |
| | Avoid prolonged contact with the product. Avoid breathing vapors of this product. Use in a well-ventilated locatio ventilation, fans). After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while he | • • |
| 7.2 | Storage & Handling: | - · |

Keep this material away from heat, sparks and open flame. Open containers slowly on a stable surface. Keep container closed tightly when not in use. Empty container may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, other light sources, or sources of intense heat. Store away from incompatible materials (see Section 10).

7.3 Special Precautions:

Open containers slowly on a stable surface. Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care.

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| | 8 | 8. EXPOSURE CONTROLS & PERSONAL PROTECTION |
|------|---|--|
| 8.1 | Ventilation & Engineering Controls: | |
| | | uantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure that an shbasin is available in case of exposure to eyes. |
| 8.2 | Respiratory Protection: | |
| | protection authorized per | ection is required under typical circumstances of use or handling. If necessary, use only respiratory U.S. OSHA's requirement in 29 CFR §1910.134, or applicable U.S. state regulations, or the appropriate princes, E.C. member states, or Australia. |
| 8.3 | Eye Protection: Depending on the use of the Canadian standards, or the | his product, splash or safety glasses may be worn. If necessary, refer to U.S. OSHA 29 CFR §1910.133, European Standard EN166. |
| 8.4 | Hand Protection: | |
| | industrial use. If necessary, | ed & repeated skin contact will occur during use of this product, wear latex or rubber gloves for routine refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states. |
| 8.5 | Body Protection: | |
| | No special body protection of Canada, the E.C. membe | is required under typical circumstances of use and handling. If necessary, refer to appropriate standards r states, or U.S. OSHA. |
| | | |
| | | 9. PHYSICAL & CHEMICAL PROPERTIES |
| 9.1 | Density: | 0.990 |
| 9.2 | Boiling Point: | 171 - 640°F |
| 9.3 | Melting Point: | NE |
| 9.4 | Evaporation Rate: | NA |
| 9.5 | Vapor Pressure: | NA |
| 9.6 | Molecular Weight: | NE |
| 9.7 | Appearance & Color: | Viscous liquid |
| 9.8 | Odor Threshold: | ND |
| 9.9 | Solubility: | Insoluble |
| 9.10 | рН | NA (non-aqueous) |
| 9.11 | Viscosity: | 1000 - 3000 cPs |
| 9.12 | Other Information: | NA |
| | | |
| | | 10. STABILITY & REACTIVITY |
| 10.1 | Stability: Stable under ambient condi | tions when stored properly (see Section 7, Storage and Handling). |
| 10.2 | Hazardous Decomposition Products: | |
| | If exposed to extremely hig gases (e.g., CO, CO ₂). | h temperatures, the products of thermal decomposition may include irritating vapors and carbon oxide |
| 10.3 | Hazardous Polymerization: | |
| | May occur, if exposed to ex | tremely high temperatures. |
| 10.4 | Conditions to Avoid: | |
| | This product is incompatible strong bases (e.g., lye, pota | with strong oxidizers (e.g., peroxides, superoxides), strong acids (e.g., hydrochloric or muriatic acids), or ssium hydroxide). |
| 10.5 | Incompatible Substances: | |
| | None known. | |

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11. TOXICOLOGICAL INFORMATION 11.1 Toxicity Data This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. These data have not been presented in this document. 11.2 Acute Toxicity See Section 2.5 11.3 Chronic Toxicity: See Section 2.6 11.4 Suspected Carcinogen: NO. 11.5 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. 11.6 Irritancy of Product: See Section 2.3 11.7 Biological Exposure Indices: NF Physician Recommendations: 11.8 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: Ethyl Acetate: Koc = 0.73. Water solubility: 64,000 mg/l. Bioconcentration Factor = 4-14. Bioconcentration is not anticipated to be significant. This compound can be removed from contaminated environments from volatilization, and biodegradation. This compound's half-life in water is 6.1 hours. <u>Butyl Acetate</u>: K_{OC} = 1.82. Water solubility: 120 parts H₂O at 25°C (77°F). Bioconcentration Factor = 4-14. Bioconcentration is not anticipated to be significant. This compound can be removed from contaminated environments from volatilization, and biodegradation. This compound's half-life in water is 6.1 hours. Isopropyl Alcohol: Log Kow = 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. Isopropyl alcohol 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; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. **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)

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| NSDS-194 | | TY DATA SH | | $\mathbf{P} \cdot \mathbf{P} \cdot \mathbf{I}$ Mat | U ·P· |
| 11/24/2008 | MSDS Revision Dat | MSDS Revision: 3.0 | & 2001/58 EC Standards | ared to OSHA, ACC, ANSI, NOHSC, WHMIS | Prepared to OSH |
| | | | | | |
| | | N INFORMATION | TRANSPORTATIO | 14 | |
| of transportation | | | | asic description (ID Number, proper shippion) ional descriptive information may be req | |
| | | | | | 14.1 49 CFR (GND): CONSUMER |
| | | | L) | | 14.2 IATA (AIR): CONSUMER |
| | | | | IMDG (OCN): UN1263, PAINT, 3, II, LTD QTY (≤ 1.0 L) UN1263, PAINT, 3, II (> 1.0 L) | |
| | . ania | TY" or "QUANT LTÉE" (≤ 1.0 L | UANTITÉ LIMITÉE" or "LTD Q | TDGR (Canadian GND): MARK PACKAGE "LIMITED QUANTITY" or "(| MARK PAC |
| | | | .0 L) | UN1263, PAINT, 3, II (> 1.0 L) ADR/RID (EU): UN1263, PAINT, 3, 3 °(b), ADR, LTD QTY (≤ | 14.5 ADR/RID (EU): |
| | | | - | | 14.6 SCT (MEXICO): |
| | | | | ADGR (AUS): UN1263, PAINT, 3, 3 °(b), LTD QTY (≤ 1.0 L) | . , |
| | | NFORMATION | 5. REGULATORY | | |
| | | pyl Alcohol. | tate, Ethyl Acetate, Isopro | SARA Reporting Requirements: SARA 304 (40 CFR Table 302.4) – Butyl Ac | |
| | | | | SARA Threshold Planning Quantity: | |
| | | | on the TSCA Inventory. | TSCA Inventory Status: The components of this product are listed | , |
| | | | | CERCLA Reportable Quantity (RQ): | |
| | | | etate: 2270 kg (5000 lbs.). | | |
| netics) | R subchapter G (Ca | l Drug Administration's 21 (| e sections of the Food and | | |
| <u></u> | | | | Other Canadian Regulations: | |
| (Ţ) | L. None | uct are listed on the DSL/N | components of this produ | This product has been classified accordi the information required by the CPR. The | This product the information the information of the second |
| | iins all of L. None | I Drug Administration's 21 (the CPR and the MSDS con uct are listed on the DSL/N | etate: 2270 kg (5000 lbs.). e sections of the Food and g to the hazard criteria of components of this produ | CERCLA Reportable Quantity (RQ): Butyl Acetate: 2270 kg (5000 lbs); Ethyl A Other Federal Requirements: This product complies with the approprio Other Canadian Regulations: This product has been classified accordi | The compo 15.4 CERCLA Repor Butyl Aceta Butyl Aceta 15.5 Other Federal This product This product 15.6 Other Canadia This product This product 15.6 Other Information |

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| | | | | | | | |
| | - | 15. REGULATORY INF | ORMATION - continue | ed | | | |
| 15.7 | State Regulatory Inform Ingredients in this | | ia lists: | | | | |
| Ingredients in this mixture on found on the following state criter California OSHA Hazardous Substances List Delaware Air Quality Management List Massachusetts Hazardous Substances List Michigan Critical Substances List Minnesota Hazardous Substances List New Jersey Right to Know Hazardous Substances List New York List of Hazardous Substances Pennsylvania Hazardous Substances List Washington Permissible Exposure Limits for Air Contaminants | | , , , , , , , , , | | | | | |
| | Wisconsin Hazard | ous Substances List | Triphenyl Phosphate Ethyl Acetate, Diacetone Alcohol, Propyl Acetate | | | | |
| 15.8 | 67/548/EEC (European | Jnion) Requirements: | | | | | |
| | Butyl Acetate: Flo Keep away from discharges. Ethyl Acetate: Flo and skin. S: 2-16- smoking. Do not | bonent of this product is not listed in Annex I of immable (F). R: Flammable. S: 9-16-33 - Ke in sources of ignition - No smoking. Take mmable (F). R: 11-36/37/38 – Highly flamm 23-29-33 – Keep out of the reach of children breathe gas, fumes, vapor or spray. Do no static discharges. 3YE | eep container in a well-ventila precautionary measures ago able. Irritating to eyes, respirate . Keep away from sources of ig | ainst static ory system nition - No | | | |

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| | | | 16. OTHER I | NFORMATION | | |
| 16.1 | thoroughly with running w | ater. Use only | in a well-ventilated ar | e only as directed. Avoid e ea. If redness or other signs EEP OUT OF REACH OF CHILD | of adverse reaction | |
| 16.2 | Terms & Definitions: | | | | | |
| 16.3 | Please see last page of thi Disclaimer: | is MSDS. | | | | |
| | information contained he guaranteed and no warra to the specific product(s) may be changed from tim | erein is reliable anties of any ty . If this produc | e and accurate as c pe, either expressed c ct(s) is combined with | this product. To the best of S of this date; however, accu or implied, are provided. The other materials, all compor est edition. | uracy, suitability or e information contai | completeness are no ined herein relates on |
| 16.4 | Prepared for: OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 +1 (818) 759-2400 phone +1 (818) 759-5770 fax http://www.opi.com/ | USA | 0·P·I | | | |
| 16.5 | Prepared by: ShipMate, Inc. P.O. Box 787 780 Buckaroo Trail Suite D Sisters, OR 97759 +1 (310) 370-3600 phone +1 (310) 370-5700 fax | | | Mate rous Goods ing & Consulting | | |



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DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. 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 |
|-------|---|
| TLV | Threshold Limit Value |
| OSHA | U.S. Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| IDLH | Immediately Dangerous to Life and Health |

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. | | | | |

HEALTH

FLAMMABILITY

PERSONAL PROTECTION

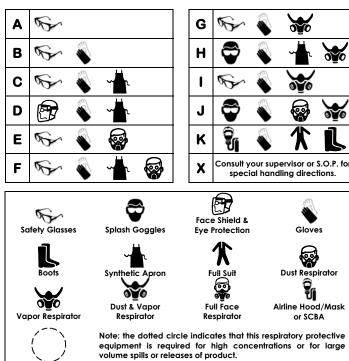
REACTIVITY

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

PERSONAL PROTECTION RATINGS:



OTHER STANDARD ABBREVIATIONS:

| NA | NA Not Available | | | | |
|--------------------|------------------------------------|--|--|--|--|
| NR | No Results | | | | |
| NE Not Established | | | | | |
| ND Not Determined | | | | | |
| ML | Maximum Limit | | | | |
| SCBA | Self-Contained Breathing Apparatus | | | | |

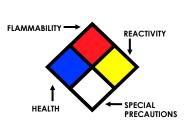
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

| Autoignition Temperature | | | | | |
|-----------------------------|---|--|--|--|--|
| 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 | | |
| ОХ | Oxidizer | | |
| | | | |



TOXICOLOGICAL INFORMATION:

| LD ₅₀ | Lethal Dose (solids & liquids) which kills 50% of the exposed animals s | | | | |
|--|---|--|--|--|--|
| LC 50 | Lethal concentration (gases) which kills 50% of the exposed animal | | | | |
| ppm Concentration expressed in parts of mate million parts | | | | | |
| TD _{lo} | Lowest dose to cause a symptom | | | | |
| TCLo | Lowest concentration to cause a symptom | | | | |
| TDIo, LDIo, & LDo OF | o, LD _{Io} , & LD _o or Lowest dose (or concentration) to cause lethal or | | | | |
| TC, TC _o , LC _{lo} , & LC _o | LC _{Io} , & LC _o toxic effects | | | | |
| IARC | C International Agency for Research on Cancer | | | | |
| NTP | National Toxicology Program | | | | |
| RTECS | Registry of Toxic Effects of Chemical Substances | | | | |
| BCF | Bioconcentration Factor | | | | |
| TLm | Median threshold limit | | | | |
| log Kow or log Koc | 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 | | | | |
| 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) | | | | |

EC INFORMATION:

| V | | 1× | * | 8 | X | × | × |
|-----------|-----------|-----------|---------|-----------|----------|----------|---------|
| С | E | F | Ν | 0 | T+ | Xi | Xn |
| Corrosive | Explosive | Flammable | Harmful | Oxidizing | Toxic | Irritant | Harmful |