





# MATERIAL SAFETY DATA SHEET

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CND-N-037

Prepared to OSHA, ACC, ANSI and WHMIS Standards

MSDS Revision Date 11/01/2002

## 3. HAZARD IDENTIFICATION

|     |   |             |            |             |            |            |            |
|-----|---|-------------|------------|-------------|------------|------------|------------|
| 3.1 | Hazard Identification:  |             |            |             |            |            |            |
| 3.2 | Routes of Entry:  | Inhalation: | <b>YES</b> | Absorption: | <b>YES</b> | Ingestion: | <b>YES</b> |
| 3.3 | <p>Effects of Exposure:</p> <p><b>INGESTION:</b> If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression.</p> <p><b>SKIN &amp; EYES:</b> Mildly to moderately 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.</p> <p><b>INHALATION:</b> 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 &amp; Ingredient Information) can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).</p> |             |            |             |            |            |            |
| 3.4 | <p>Symptoms of Overexposure:</p> <p><b>Symptoms of skin overexposure in some sensitive individuals may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering.</b></p>  |             |            |             |            |            |            |
| 3.5 | <p>Acute Health Effects:</p> <p><b>Mild to moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.</b></p>   |             |            |             |            |            |            |
| 3.6 | <p>Chronic Health Effects:</p> <p><b>None known.</b></p>  |             |            |             |            |            |            |
| 3.7 | <p>Target Organs:</p> <p><b>Eyes, skin &amp; respiratory system.</b></p>  |             |            |             |            |            |            |

## 4. FIRST AID MEASURES

|     |   |  |  |  |  |  |  |
|-----|---|--|--|--|--|--|--|
| 4.1 | <p>First Aid:</p> <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 Rocky Mountain Poison Control Center at 1-303-623-5716 or 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. Open and close eyelid(s) to ensure thorough irrigation. 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 effected area with soap and water. Do not wear contaminated clothing until after it has been properly cleaned. If irritation, redness or swelling persists, contact a physician immediately.</p> <p><b>INHALATION:</b> Remove victim to fresh air at once. If breathing stops, perform artificial respiration. Seek immediate medical attention.</p> |  |  |  |  |  |  |
|-----|---|--|--|--|--|--|--|

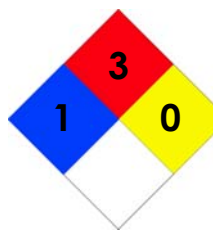
|                             |   |  |   |  |               |          |                     |          |                   |          |                             |          |
|-----------------------------|---|--|---|--|---------------|----------|---------------------|----------|-------------------|----------|-----------------------------|----------|
| 4.2                         | <p>Medical Conditions Aggravated by Exposure:</p> <p><b>None known.</b></p> |  | <table border="1"> <tr> <td><b>HEALTH</b></td> <td><b>1</b></td> </tr> <tr> <td><b>FLAMMABILITY</b></td> <td><b>3</b></td> </tr> <tr> <td><b>REACTIVITY</b></td> <td><b>0</b></td> </tr> <tr> <td><b>PROTECTIVE EQUIPMENT</b></td> <td><b>X</b></td> </tr> </table> |  | <b>HEALTH</b> | <b>1</b> | <b>FLAMMABILITY</b> | <b>3</b> | <b>REACTIVITY</b> | <b>0</b> | <b>PROTECTIVE EQUIPMENT</b> | <b>X</b> |
| <b>HEALTH</b>               | <b>1</b>  |  |   |  |               |          |                     |          |                   |          |                             |          |
| <b>FLAMMABILITY</b>         | <b>3</b>  |  |   |  |               |          |                     |          |                   |          |                             |          |
| <b>REACTIVITY</b>           | <b>0</b>  |  |   |  |               |          |                     |          |                   |          |                             |          |
| <b>PROTECTIVE EQUIPMENT</b> | <b>X</b>  |  |   |  |               |          |                     |          |                   |          |                             |          |

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## 5. FIREFIGHTING MEASURES

|     |  |
|-----|--|
| 5.1 | Flashpoint & Method:<br><b>13°C (55°F) TCC</b>   |
| 5.2 | Autoignition Temperature:<br><b>NA</b>   |
| 5.3 | Flammability Limits:<br>Lower Explosive Limit (LEL): <b>1.45%</b> Upper Explosive Limit (UEL): <b>8.2%</b>   |
| 5.4 | Fire & Explosion Hazards:<br><b>WARNING: Flammable! Keep away from heat, lit cigarettes, sparks &amp; open flame. Keep container closed.</b>   |
| 5.5 | Extinguishing Methods:<br><b>CO<sub>2</sub>, Halon, Dry Chemical, Foam</b>   |
| 5.6 | Firefighting Procedures:<br><b>This product is a Class IB flammable liquid. When involved in a fire, this product will ignite readily and 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.</b><br><b>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.</b> |



RED = FLAMMABILITY  
BLUE = HEALTH  
YELLOW = REACTIVITY  
WHITE = SPECIAL MEASURES

0 = NO HAZARD  
1 = MINIMAL HAZARD  
2 = SLIGHT HAZARD  
3 = MODERATE HAZARD  
4 = SEVERE HAZARD

## 6. ACCIDENTAL RELEASE MEASURES

|     |   |
|-----|---|
| 6.1 | Spills:<br><b>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment.</b><br><b>For small spills (e.g., &lt;1 gallon) 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.</b><br><b>For spills ≥ 1 gallon, deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</b> |
|-----|---|

## 7. HANDLING & STORAGE INFORMATION

|     |   |
|-----|---|
| 7.1 | Work & Hygiene Practices:<br><b>Avoid prolonged contact with the product. Avoid breathing vapors of this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap &amp; water. Do not eat, drink or smoke while handling product.</b>   |
| 7.2 | Storage & Handling:<br><b>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.</b> |
| 7.3 | Special Precautions:<br><b>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.</b>   |



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## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

|     |  |
|-----|--|
| 8.1 | Ventilation & Engineering Controls:<br><b>When working with large quantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.</b>   |
| 8.2 | Respiratory Protection:<br><b>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.</b> |
| 8.3 | Eye Protection:<br><b>Avoid eye contact. None required under normal conditions of use. However, may cause irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), safety glasses with side shields should be used.</b>  |
| 8.4 | Hand Protection:<br><b>None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), wear rubber or plastic impervious gloves.</b>  |
| 8.5 | Body Protection:<br><b>No apron required when handling small quantities.<br/>When handling large quantities (e.g., ≥ 1 gallon), 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.</b>                                      |

## 9. PHYSICAL & CHEMICAL PROPERTIES

|      |                     |   |
|------|---------------------|---|
| 9.1  | Density:            | <b>0.948 - 0.984</b>  |
| 9.2  | Boiling Point:      | <b>171 - 228°F</b>  |
| 9.3  | Melting Point:      | <b>NA</b>   |
| 9.4  | Evaporation Rate:   | <b>2-3 (Butyl Acetate = 1)</b>  |
| 9.5  | Vapor Pressure:     | <b>35 - 42 mm Hg</b>  |
| 9.6  | Molecular Weight:   | <b>NA</b>   |
| 9.7  | Appearance & Color: | <b>Transparent to pale violet viscous liquid with a strong ester-like odor.</b> |
| 9.8  | Odor Threshold:     | <b>ND</b>   |
| 9.9  | Solubility:         | <b>Moderately soluble in water.</b>   |
| 9.10 | pH                  | <b>NA</b>   |
| 9.11 | Viscosity:          | <b>NA</b>   |
| 9.12 | Other Information:  | <b>Vapor density 3.2 - 3.6 @ 20°C (68°F) (air = 1)</b>                          |

## 10. STABILITY & REACTIVITY

|      |                                   |  |
|------|-----------------------------------|--|
| 10.1 | Stability:                        | <b>Stable under ambient conditions when stored properly (see Section 7, Storage and Handling).</b>   |
| 10.2 | Hazardous Decomposition Products: | <b>If exposed to extremely high temperatures, the products of thermal decomposition may include irritating vapors and carbon oxide gases (e.g., CO, CO<sub>2</sub>).</b>                         |
| 10.3 | Hazardous Polymerization:         | <b>May occur, if exposed to extremely high temperatures.</b>   |
| 10.4 | Conditions to Avoid:              | <b>This product is incompatible with strong oxidizers (e.g., peroxides, superoxides), strong acids (e.g., hydrochloric or muriatic acids), or strong bases (e.g., lye, potassium hydroxide).</b> |
| 10.5 | Incompatible Substances:          | <b>None reported by the manufacturer.</b>  |

## 11. TOXICOLOGICAL INFORMATION

|      |                       |   |
|------|-----------------------|---|
| 11.1 | Toxicity Data:        | <b>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.</b> |
| 11.2 | Acute Toxicity:       | <b>See Section 3.5</b>  |
| 11.3 | Chronic Toxicity:     | <b>See Section 3.6</b>  |
| 11.4 | Suspected Carcinogen: | <b>This product contains Isopropyl Alcohol, which is classified as a Group 3 carcinogen (not classifiable as a human carcinogen) by the IARC.</b>   |

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|      |                              |   |
|------|------------------------------|---|
| 11.5 | Reproductive Toxicity:       | <b>None</b>   |
|      | Mutagenicity:                | <b>This product is not reported to produce mutagenic effects in humans.</b>   |
|      | Embryotoxicity:              | <b>This product is not reported to produce embryotoxic effects in humans.</b> |
|      | Teratogenicity:              | <b>This product is not reported to cause teratogenic effects in humans.</b>   |
|      | Reproductive Toxicity:       | <b>This product is not reported to cause reproductive effects in humans.</b>  |
| 11.6 | Irritancy of Product:        | <b>See Section 3.3</b>  |
| 11.7 | Biological Exposure Indices: | <b>NE</b>   |
| 11.8 | Physician Recommendations:   | <b>Treat symptomatically.</b>   |

## 12. ECOLOGICAL INFORMATION


|      |                              |   |
|------|------------------------------|---|
| 12.1 | Environmental Stability:     | <p>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:</p> <p><b>Butyl Acetate:</b> <math>K_{oc} = 1.82</math>. Water solubility: 120 parts H<sub>2</sub>O 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.</p> <p><b>Ethyl Acetate:</b> <math>K_{oc} = 0.73</math>. 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.</p> <p><b>Isopropyl Alcohol:</b> Log <math>K_{ow} = 0.05-0.14</math>. 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.</p> |
| 12.2 | Effects on Plants & Animals: | <b>There are no specific data available for this product.</b>   |
| 12.3 | Effects on Aquatic Life:     | <b>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.</b>   |

## 13. DISPOSAL CONSIDERATIONS

|      |                         |   |
|------|-------------------------|---|
| 13.1 | Waste Disposal:         | <b>Waste disposal must be in accordance with appropriate Federal, state, and local regulations.</b> |
| 13.2 | Special Considerations: | <b>U.S. EPA WASTE NUMBER: D001 (characteristic - ignitable)</b>                                     |

## 14. TRANSPORTATION INFORMATION


The basic description (proper shipping name, hazard class & division, ID Number, 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):<br><b>CONSUMER COMMODITY, ORM-D (≤ 1.0 L)</b>   |  |
| 14.2 | IATA (AIR):<br><b>CONSUMER COMMODITY, 9, ID8000 (≤ 0.5 L)<br/>FLAMMABLE LIQUID, N.O.S. (butyl acetate, ethyl acetate), 3, UN1993, II (&gt; 0.5 L)</b> |   |
| 14.3 | IMDG (OCN):<br><b>FLAMMABLE LIQUID, N.O.S. (butyl acetate, ethyl acetate), 3, UN1993, II, LTD QTY (≤ 1.0 L)</b>                                       |   |
| 14.4 | TDGR (Canadian GND):<br><b>CONSUMER COMMODITY</b>   |   |



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## 15. REGULATORY INFORMATION

|      |   |   |
|------|---|---|
| 15.1 | SARA Reporting Requirements:<br><b>SARA 304 (40 CFR Table 302.4) - Butyl Acetate, Ethyl Acetate</b>   |   |
| 15.2 | SARA Threshold Planning Quantity:<br><b>There are no specific Threshold Planning Quantities for the components of this product.</b>   |   |
| 15.3 | TSCA Inventory Status:<br><b>The components of this product are listed on the TSCA Inventory.</b>   |   |
| 15.4 | CERCLA Reportable Quantity (RQ):<br><b>Butyl Acetate = 5000 lbs (2270 kgs); Dibutyl Phthalate = 10 lbs (4.54 kgs)</b>   |   |
| 15.5 | Other Federal Requirements:<br><b>This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).</b>  |   |
| 15.6 | Other Canadian Regulations:<br><b>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. Class B2 Flammable Liquid.</b> |  |
| 15.7 | State Regulatory Information:<br><b>Butyl Acetate, Ethyl Acetate, and Isopropyl Alcohol are covered under specific state criteria.</b>  |   |

## 16. OTHER INFORMATION

|      |  |   |
|------|--|---|
| 16.1 | Other Information:<br><b>Warning! Flammable. Keep away from heat, lit cigarettes, sparks and open flam. Keep container closed. Avoid inhalation. Store in a cool place. Keep away from children.</b>   |   |
| 16.2 | Terms & Definitions:<br><b>See page 7 of this MSDS.</b>  |   |
| 16.3 | Disclaimer:<br>This Material 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 & Creative Nail Design's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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:<br><b>Creative Nail Design, Inc.<br/>1125 Joshua Way<br/>Vista, CA 92083<br/>800-833-NAIL (6245) phone<br/>760-599-4005 fax<br/><a href="http://www.creativenaildesign.com/">http://www.creativenaildesign.com/</a></b>  |  |
| 16.5 | Prepared by:<br><b>ShipMate, Inc.<br/>18436 Hawthorne Boulevard, Suite 201<br/>Torrance, CA 90504<br/>310-360-3700 phone<br/>310-360-5700 fax<br/><a href="http://www.shipmate.com/">http://www.shipmate.com/</a></b>  |  |



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## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

### EXPOSURE LIMITS IN AIR:

**ACGIH** – The American Conference on Governmental Industrial Hygienists, a professional association that establishes exposure limits.

**TLV** – Threshold Limit Value – an airborne concentration of a substance that represents conditions under which it is generally believed that all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effect must also be considered.

**OSHA** – U.S. Occupational Safety and Health Administration

**PEL** – Permissible Exposure Limit – This exposure value means exactly the same as TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order.

**IDLH** – Immediately Dangerous to Life and Health – This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. The **DFG – MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. NIOSH is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established; an entry of **NE** is made for reference.

### 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.

### HAZARD RATINGS:

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards. Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquids or solids; liquids with a flashpoint of 38-93C [100-200F]); **3** (Class 1B and 1C flammable liquids with flash points below 38C [100F]; **4** (Class 1A flammable liquids with flash points below 23C [73F] and boiling points below 38C [100F]). Reactivity Hazard: **0** (normally stable); **1** (materials that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate when initiated or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures). PPE Rating **B:** Hand and eye protection is required for routine chemical use.

**NATIONAL FIRE PROTECTION ASSOCIATION:** Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (material that under very short exposure could cause death or major residual injury).

Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System."

### FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point – minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. **LEL** – the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** – the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

### TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms use dinit his section are: **LD<sub>50</sub>** – Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC<sub>50</sub>** – Lethal concentration (gases) which kills 50% of the exposed animals; **ppm** – concentration expressed in parts of material per million parts of air or water; **mg/m<sup>3</sup>** – concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TD<sub>01</sub>**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TD<sub>01</sub>**, **LD<sub>01</sub>**, and **LD<sub>01</sub>**, or **TC**, **TC<sub>01</sub>**, **LC<sub>01</sub>**, and **LC<sub>01</sub>**, the lowest dose (or concentration) to cause lethal or toxic effects. Cancer Information: The sources are: **IARC** – the International Agency for Research on Cancer; **NTP** – the National Toxicology Program, **RTECS** – the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Sub rankings (2A, 2B, etc.) are also used. Other Information: **BEI** – ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a health worker who has been exposed to chemical to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** – Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. **TL<sub>m</sub>** – median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K<sub>ow</sub>** or **log K<sub>oc</sub>** and is used to assess a substance's behavior in the environment.

### REGULATORY INFORMATION:

**U.S. and CANADA:** This section explains the impact of various laws and regulation of the material. **EPA** is the U.S. Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Material Information System. **DOT** and **TC** are the U.S. Department of Transportation and Transport Canada, respectively. Superfund Amendments and Reauthorization Act (**SARA**); the Canadian Domestic/Non-Domestic Substance List (**DSL/NDL**); the U.S. Toxic Substance Control Act (**TSCA**); Marine Pollutant status according to the DOT; the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA** or **Superfund**); and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

**EUROPEAN and INTERNATIONAL:** **EC** is the European Community, formerly known as the EEC, European Economic Community). **EINECS:** This is the European Inventory of Now-Existing Chemical Substances. **AICS** is the Australian Inventory of Chemical Substances. **MITI** is the Japanese Minister of International Trade and Industry. **ECL** is the Korean Existing Chemicals List. **IMO** is the International Maritime Organization and **IATA** is the International Air Transport Association. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail.

