

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

MSDS Revision: 1.1

MSDS Revision Date: 11/01/2006

## 1. PRODUCT IDENTIFICATION

|     |                                                                                     |
|-----|-------------------------------------------------------------------------------------|
| 1.1 | Product Name:<br><b>MANICURE FINISHING BUTTER</b>                                   |
| 1.2 | Chemical Name:<br><b>AQUEOUS LOTION</b>                                             |
| 1.3 | Synonyms:<br><b>NA</b>                                                              |
| 1.4 | Trade Names:<br><b>MC132, MC137, MC138</b>                                          |
| 1.5 | Product Use:<br><b>PROFESSIONAL OR SUNDRY USE ONLY</b>                              |
| 1.6 | Manufacturer's Name:<br><b>OPI PRODUCTS, INC.</b>                                   |
| 1.7 | Manufacturer's Address:<br><b>13034 SATICOY STREET, NO. HOLLYWOOD, CA 91605 USA</b> |
| 1.8 | Emergency Phone:<br><b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300</b>          |
| 1.9 | Business Phone:<br><b>+1 (818) 759-2400 / +1 (800) 341-9999</b>                     |

## 2. HAZARD IDENTIFICATION

|     |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | Hazard Identification:<br><b>This product is not classified as a hazardous substance or as dangerous goods according to the classification criteria of NOHSC and ADG Code (Australia).</b>                                                                                                                                                                                                                      |
| 2.2 | Routes of Entry:<br>Inhalation: <b>NO</b> Absorption: <b>YES</b> Ingestion: <b>YES</b>                                                                                                                                                                                                                                                                                                                          |
| 2.3 | Effects of Exposure:<br><b>INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea.</b><br><b>SKIN &amp; EYES: Slightly irritating to the eyes. May be irritating to skin in some sensitive individuals, especially after prolonged contact.</b><br><b>INHALATION: Inhalation is unlikely, however, vapors of this product may be slightly irritating to some sensitive individuals.</b> |
| 2.4 | Symptoms of Overexposure:<br><b>Symptoms of overexposure may include redness, itching, and irritation.</b>                                                                                                                                                                                                                                                                                                      |
| 2.5 | Acute Health Effects:<br><b>Redness, itching, and irritation of skin at the site of contact for some sensitive individuals.</b>                                                                                                                                                                                                                                                                                 |
| 2.6 | Chronic Health Effects:<br><b>No chronic health effects are known, although symptoms and discomfort may occur for several days following overexposure following ingestion. Benzyl alcohol, isopropylparaben, isobutylparaben, benzophenone, benzoic acid and butylparaben, contained in very small quantities in this product, may be mild allergens to some sensitive individuals.</b>                         |
| 2.7 | Target Organs:<br><b>Eyes.</b>                                                                                                                                                                                                                                                                                                                                                                                  |

NA = Not Available; ND = Not Determined; NE = Not Established; 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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## 3. COMPOSITION &amp; INGREDIENT INFORMATION

| CHEMICAL NAME(S)                                                | CAS No.    | RTECS No. | EINECS No. | %      | EXPOSURE LIMITS IN AIR (mg/m³) |      |            |      |      | OTHER |
|-----------------------------------------------------------------|------------|-----------|------------|--------|--------------------------------|------|------------|------|------|-------|
|                                                                 |            |           |            |        | ACGIH – ppm                    |      | OSHA - ppm |      |      |       |
|                                                                 |            |           |            |        | TLV                            | STEL | PEL        | STEL | IDLH |       |
| AQUA (WATER)                                                    | 7732-18-5  | ZC0110000 | 231-791-2  | ≤ 60.0 | NE                             | NE   | NE         | NE   | NE   |       |
| CYCLOMETHICONE                                                  | 69430-24-6 | GZ4063000 | 209-136-7  | ≤ 10.0 | NE                             | NE   | NE         | NE   | NE   |       |
| ETHYLHEXYL METHOXYCINNIMATE                                     | 5466-77-3  | NA        | 226-775-7  | ≤ 10.0 | NE                             | NE   | NE         | NE   | NE   |       |
| CAPRYLYL METHICONE                                              | 17955-88-3 | NA        | 241-881-3  | ≤ 10.0 | NE                             | NE   | NE         | NE   | NE   |       |
| SUCROSE STEARATE                                                | 25168-73-4 | NA        | 246-705-9  | ≤ 5.0  | NE                             | NE   | NE         | NE   | NE   |       |
| DIMETHICONE COPOLYMER                                           | NA         | NA        | NA         | ≤ 5.0  | NE                             | NE   | NE         | NE   | NE   |       |
| BENZOPHENONE-3                                                  | 131-57-7   | DJ1575000 | 205-031-5  | ≤ 5.0  | NE                             | NE   | NE         | NE   | NE   |       |
| GLYCERYL STEARATE                                               | 123-94-4   | NA        | 204-664-4  | ≤ 3.0  | NE                             | NE   | NE         | NE   | NE   |       |
| PEG-100 STEARATE                                                | 9004-99-3  | TQ5800000 | NA         | ≤ 2.0  | NE                             | NE   | NE         | NE   | NE   |       |
| HYDROXYETHYL ACRYLATE SODIUM ACRYLOYLDIMETHYL TAURATE COPOLYMER | NA         | NA        | NA         | ≤ 2.0  | NE                             | NE   | NE         | NE   | NE   |       |
| SQUALANE                                                        | 111-01-3   | XB6070000 | 203-825-6  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| POLYSORBATE 60                                                  | 9005-67-8  | WG2934000 | 267-008-6  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| ISOPROPYLPARABEN                                                | 4191-73-5  | NA        | 224-069-3  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| ISOBUTYLPARABEN                                                 | 4247-02-3  | NA        | 224-208-8  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| BUTYLPARABEN                                                    | 94-26-8    | DH1980000 | 202-318-7  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| PHENOXYETHANOL                                                  | 122-99-6   | KM0350000 | 204-589-7  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| DEHYDROACETIC ACID                                              | 520-45-6   | UP8050000 | 208-293-9  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| SALICYCLIC ACID                                                 | 69-72-7    | VO0525000 | 200-712-3  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| BENZOIC ACID                                                    | 65-85-0    | DG0875000 | 200-618-2  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| BENZETHONIUM CHLORIDE                                           | 121-54-0   | BO7175000 | 204-479-9  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| BENZYL ALCOHOL                                                  | 100-51-6   | DN3150000 | 202-859-9  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| POLYSILICONE-11                                                 | NA         | NA        | NA         | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| ETHYLHEXYL HYDROSTEARATE                                        | 29383-26-4 | NA        | 249-793-7  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| XANTHAN GUM                                                     | 11138-66-2 | NA        | 234-394-2  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| CI 15510 (ORANGE 4)                                             | 633-96-5   | DB7084000 | 211-199-0  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| FRAGRANCE (PARFUM)                                              | NA         | NA        | NA         | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| LINALOOL                                                        | 138-86-3   | OS8100000 | 205-341-0  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| d-LIMONENE                                                      | 138-86-3   | OS8100000 | 205-341-0  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |
| GERANIOL                                                        | 106-24-1   | RG5830000 | 203-377-1  | ≤ 1.0  | NE                             | NE   | NE         | NE   | NE   |       |

## 4. FIRST AID MEASURES

|     |                                            |                                                                                                                                                                                                                                                                                                                                                                |  |   |  |
|-----|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|--|
| 4.1 | First Aid:                                 |                                                                                                                                                                                                                                                                                                                                                                |  |   |  |
|     | INGESTION:                                 | If ingested, do not induce vomiting. Drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer plenty of 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 and amount of the substance that was swallowed. |  |   |  |
|     | EYES:                                      | If product is 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 problem persists, consult a physician.                                                                                                                                                             |  |   |  |
|     | SKIN:                                      | If redness, dryness or other signs of irritation to the skin develop, wash affected skin areas with plenty of warm water and soap. If irritation persists, consult a physician.                                                                                                                                                                                |  |   |  |
|     | INHALATION:                                | Remove victim to fresh air at once.                                                                                                                                                                                                                                                                                                                            |  |   |  |
| 4.2 | Medical Conditions Aggravated by Exposure: |                                                                                                                                                                                                                                                                                                                                                                |  |   |  |
|     | None known.                                |                                                                                                                                                                                                                                                                                                                                                                |  |   |  |
|     |                                            | HEALTH                                                                                                                                                                                                                                                                                                                                                         |  | 0 |  |
|     |                                            | FLAMMABILITY                                                                                                                                                                                                                                                                                                                                                   |  | 0 |  |
|     |                                            | REACTIVITY                                                                                                                                                                                                                                                                                                                                                     |  | 0 |  |
|     |                                            | PROTECTIVE EQUIPMENT                                                                                                                                                                                                                                                                                                                                           |  |   |  |
|     |                                            | EYES                                                                                                                                                                                                                                                                                                                                                           |  |   |  |

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MSDS Revision Date: 11/01/2006

## 5. FIREFIGHTING MEASURES

|     |                                                                                                       |
|-----|-------------------------------------------------------------------------------------------------------|
| 5.1 | Flashpoint & Method:<br><b>&gt; 200 °F</b>                                                            |
| 5.2 | Autoignition Temperature:<br><b>NA</b>                                                                |
| 5.3 | Flammability Limits:<br>Lower Explosive Limit (LEL): <b>NA</b> Upper Explosive Limit (UEL): <b>NA</b> |
| 5.4 | Fire & Explosion Hazards:<br><b>This product is non-flammable.</b>                                    |
| 5.5 | Extinguishing Methods:<br><b>NA</b>                                                                   |
| 5.6 | Firefighting Procedures:<br><b>NA</b>                                                                 |



## 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. For small spills (e.g., &lt;1 gallon) 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. For spills ≥ 1 gallon, deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Transfer product 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 &amp; STORAGE INFORMATION

|     |                                                                                                                                                                                                                                                   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1 | Work & Hygiene Practices:<br><b>Avoid eye contact.</b>                                                                                                                                                                                            |
| 7.2 | Storage & Handling:<br><b>Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Do not store in damaged or unmarked containers or storage devices. Keep containers securely closed when not in use.</b> |
| 7.3 | Special Precautions:<br><b>Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.</b>                                                                                                                      |

## 8. EXPOSURE CONTROLS &amp; PERSONAL PROTECTION

|     |                                                                                                                                                 |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.1 | Ventilation & Engineering Controls:<br><b>General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use.</b> |
| 8.2 | Respiratory Protection:<br><b>None required if used in a well-ventilated area.</b>                                                              |
| 8.3 | Eye Protection:<br><b>Avoid eye contact. None required under normal conditions of use.</b>                                                      |
| 8.4 | Hand Protection:<br><b>None required under normal conditions of use.</b>                                                                        |
| 8.5 | Body Protection:<br><b>None required under normal conditions of use.</b>                                                                        |

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MSDS Revision Date: 11/01/2006

## 9. PHYSICAL &amp; CHEMICAL PROPERTIES

|      |                     |                                     |
|------|---------------------|-------------------------------------|
| 9.1  | Density:            | 0.95 – 1.00                         |
| 9.2  | Boiling Point:      | ND                                  |
| 9.3  | Melting Point:      | ND                                  |
| 9.4  | Evaporation Rate:   | ND                                  |
| 9.5  | Vapor Pressure:     | ND                                  |
| 9.6  | Molecular Weight:   | ND                                  |
| 9.7  | Appearance & Color: | Beige emulsion with mint-like odor. |
| 9.8  | Odor Threshold:     | ND                                  |
| 9.9  | Solubility:         | Soluble in water.                   |
| 9.10 | pH                  | 6.0 – 6.7                           |
| 9.11 | Viscosity:          | ~ 200,000 cPs                       |
| 9.12 | Other Information:  | NA                                  |

## 10. STABILITY &amp; REACTIVITY

|      |                                   |                                                            |
|------|-----------------------------------|------------------------------------------------------------|
| 10.1 | Stability:                        | <b>This product is stable.</b>                             |
| 10.2 | Hazardous Decomposition Products: | <b>Oxides of carbon and nitrogen.</b>                      |
| 10.3 | Hazardous Polymerization:         | <b>Will not occur.</b>                                     |
| 10.4 | Conditions to Avoid:              | <b>Open flames, sparks, high heat and direct sunlight.</b> |
| 10.5 | Incompatible Substances:          | <b>None known.</b>                                         |

## 11. TOXICOLOGICAL INFORMATION

|      |                              |                                                                                 |
|------|------------------------------|---------------------------------------------------------------------------------|
| 11.1 | Toxicity Data:               | <b>The product has not been tested for specific toxicity data.</b>              |
| 11.2 | Acute Toxicity:              | <b>See section 2.5</b>                                                          |
| 11.3 | Chronic Toxicity:            | <b>See section 2.6</b>                                                          |
| 11.4 | Suspected Carcinogen:        | <b>No.</b>                                                                      |
| 11.5 | Reproductive Toxicity:       | <b>This product is not reported to produce reproductive toxicity in humans.</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 produce teratogenic effects in humans.</b>   |
|      | Reproductive Toxicity:       | <b>This product is not reported to produce reproductive effects in humans.</b>  |
| 11.6 | Irritancy of Product:        | <b>See Section 2.3</b>                                                          |
| 11.7 | Biological Exposure Indices: | <b>NE</b>                                                                       |
| 11.8 | Physician Recommendations:   | <b>Treat symptomatically.</b>                                                   |

## 12. ECOLOGICAL INFORMATION

|      |                              |                                                              |
|------|------------------------------|--------------------------------------------------------------|
| 12.1 | Environmental Stability:     | <b>There is no specific data available for this product.</b> |
| 12.2 | Effects on Plants & Animals: | <b>There is no specific data available for this product.</b> |
| 12.3 | Effects on Aquatic Life:     | <b>There is no specific data available for this product.</b> |

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## 13. DISPOSAL CONSIDERATIONS

- 13.1 Waste Disposal:  
**Dispose of in accordance with Federal, state and local regulations.**
- 13.2 Special Considerations:  
**NA**

## 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):  
**NOT REGULATED**
- 14.2 IATA (AIR):  
**NOT REGULATED**
- 14.3 IMDG (OCN):  
**NOT REGULATED**
- 14.4 TDGR (Canadian GND):  
**NOT REGULATED**
- 14.5 ADR/RID (EU):  
**NOT REGULATED**
- 14.6 MEXICO (SCT):  
**NOT REGULATED**

## 15. REGULATORY INFORMATION

- 15.1 SARA Reporting Requirements:  
**NA**
- 15.2 SARA Threshold Planning Quantity:  
**NA**
- 15.3 TSCA Inventory Status:  
**All chemical substances of this product are listed on the TSCA inventory or are otherwise exempted from inventory status.**
- 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/NDL. None of the components of this product are listed on the Priorities Substances List.**
- 15.7 State Regulatory Information:  
**None of the ingredients in this mixture are on any of the state criteria lists.**
- 15.8 67/548/EEC (European Union) Requirements:  
**The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC.**

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MSDS Revision Date: 11/01/2006

## 16. OTHER INFORMATION

16.1 Other Information:

Use only as directed. Discontinue use immediately if irritation develops.

16.2 Terms &amp; Definitions:

**See last page of this MSDS.**

16.3 Disclaimer:

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 & OPI Products' 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:

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O·P·I

16.5 Prepared by:

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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:

|                |                                  |
|----------------|----------------------------------|
| <b>CAS No.</b> | Chemical Abstract Service Number |
|----------------|----------------------------------|

## EXPOSURE LIMITS IN AIR:

|              |                                                           |
|--------------|-----------------------------------------------------------|
| <b>ACGIH</b> | American Conference on Governmental Industrial Hygienists |
| <b>TLV</b>   | Threshold Limit Value                                     |
| <b>OSHA</b>  | U.S. Occupational Safety and Health Administration        |
| <b>PEL</b>   | Permissible Exposure Limit                                |
| <b>IDLH</b>  | Immediately Dangerous to Life and Health                  |

## 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. |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

## HEALTH, FLAMMABILITY &amp; REACTIVITY RATINGS:

|          |                 |
|----------|-----------------|
| <b>0</b> | Minimal Hazard  |
| <b>1</b> | Slight Hazard   |
| <b>2</b> | Moderate Hazard |
| <b>3</b> | Severe Hazard   |
| <b>4</b> | Extreme Hazard  |



## PERSONAL PROTECTION RATINGS:

|          |  |          |                                                                    |
|----------|--|----------|--------------------------------------------------------------------|
| <b>A</b> |  | <b>G</b> |                                                                    |
| <b>B</b> |  | <b>H</b> |                                                                    |
| <b>C</b> |  | <b>I</b> |                                                                    |
| <b>D</b> |  | <b>J</b> |                                                                    |
| <b>E</b> |  | <b>K</b> |                                                                    |
| <b>F</b> |  | <b>X</b> | Consult your supervisor or S.O.P. for special handling directions. |

|                                                                                                                                                                     |                         |                              |                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------|---------------------------|
| Safety Glasses                                                                                                                                                      | Splash Goggles          | Face Shield & Eye Protection | Gloves                    |
| Boots                                                                                                                                                               | Synthetic Apron         | Full Suit                    | Dust Respirator           |
| Vapor Respirator                                                                                                                                                    | Dust & Vapor Respirator | Full Face Respirator         | Airline Hood/Mask or SCBA |
| Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product. |                         |                              |                           |

## OTHER STANDARD ABBREVIATIONS:

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

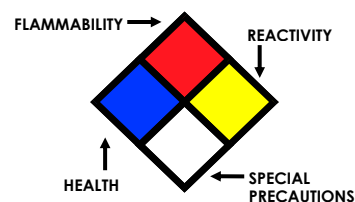
## NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

## FLAMMABILITY LIMITS IN AIR:

|                                 |                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Autoignition Temperature</b> | Minimum temperature required to initiate combustion in air with no other source of ignition                                           |
| <b>LEL</b>                      | Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source  |
| <b>UEL</b>                      | Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source |

## HAZARD RATINGS:

|            |                 |
|------------|-----------------|
| <b>0</b>   | Minimal Hazard  |
| <b>1</b>   | Slight Hazard   |
| <b>2</b>   | Moderate Hazard |
| <b>3</b>   | Severe Hazard   |
| <b>4</b>   | Extreme Hazard  |
| <b>ACD</b> | Acidic          |
| <b>ALK</b> | Alkaline        |
| <b>COR</b> | Corrosive       |
| <b>-W</b>  | Use No Water    |
| <b>OX</b>  | Oxidizer        |



## 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>0</sub> or TC, TC<sub>0</sub>, LC<sub>10</sub>, &amp; LC<sub>0</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)     |

## EC INFORMATION:

|           |           |           |          |           |           |           |           |
|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
|           |           |           |          |           |           |           |           |
| <b>C</b>  | <b>E</b>  | <b>F</b>  | <b>N</b> | <b>O</b>  | <b>T+</b> | <b>Xi</b> | <b>Xn</b> |
| Corrosive | Explosive | Flammable | Harmful  | Oxidizing | Toxic     | Irritant  | Harmful   |