

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58 & 1272/2008/EC Standards


SDS Revision: 1.0

SDS Revision Date: 9/29/2016

1. PRODUCT & COMPANY IDENTIFICATION

| | | |
|-----|------------------------|--|
| 1.1 | Product Name: | OPI ProSpa NAIL & CUTICLE OIL |
| 1.2 | Chemical Name: | Natural Oil Mixture |
| 1.3 | Synonyms: | NA |
| 1.4 | Trade Names: | AS200/ AS201/ AS202 |
| 1.5 | Product Use: | Professional Or Sundry Use Only |
| 1.6 | Distributor's Name: | OPI Products, Inc. |
| 1.7 | Distributor's Address: | 13034 Satcoy Street, No. Hollywood, CA 91605 USA |
| 1.8 | Emergency Phone: | CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 16377) |
| 1.9 | Business Phone / Fax: | +1 (818) 759-2400 / +1 (818) 759-5776 |

2. HAZARDS IDENTIFICATION

| | | | |
|-----|------------------------|--|---|
| 2.1 | Hazard Identification: | <p>This product is not classified as a HAZARDOUS SUBSTANCE or as DANGEROUS GOODS according to the classification criteria of NOHSC: 1008 (2004) and ADG Code (Australia).</p> <p>WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION.</p> <p><u>Classification:</u> Skin Sens. 1A</p> <p><u>Hazard Statements (H):</u> H317 – May cause an allergic skin reaction.</p> <p><u>Precautionary Statements (P):</u> P261 – Avoid breathing mist/spray. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention. P321 - Specific treatment (See Section 4 of this Safety Data Sheet). P362+P364 - Take off contaminated clothing and wash before reuse.</p> |  |
|-----|------------------------|--|---|

3. COMPOSITION & INGREDIENT INFORMATION

| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | EXPOSURE LIMITS IN AIR (mg/m ³) | | | | | | | | | OTHER |
|--|-------------|------------|------------|---------|--|------|--------|---------|---------|------|------|------|--|-------|
| | | | | | ACGIH | | NOHSC | | | OSHA | | | | |
| | | | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | | |
| PERSEA GRATISSIMA (AVOCADO) OIL | 8024-32-6 | CL2680000 | 232-428-0 | 15-40 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| ETHYLHEXYL PALMITATE | 29806-73-3 | NA | 249-862-1 | 10-30 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| VITIS VINIFERA (GRAPE) SEED OIL | 8024-22-4 | NA | 273-313-5 | 10-30 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| ISOPROPYL PALMITATE | 142-91-6 | RT4900000 | 205-571-1 | 5-10 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| | | | | | Skin Irrit. 2; Eye Irrit. 2A; H315, H319 | | | | | | | | | |
| HELIANTHUS ANNUUS (SUNFLOWER) SEED OIL | 84776-03-4 | NA | 232-273-9 | 5-10 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| LECITHIN | 8002-43-5 | OG7565000 | 297-639-2 | 5-10 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| SESAMUM INDICUM (SESAME) SEED OIL | 8008-74-0 | VU3940000 | 232-370-6 | 5-10 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| CAPRYLIC/CAPRIC TRIGLYCERIDE | 65381-09-1 | NA | 265-724-3 | 5-10 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| FRAGRANCE (PARFUM) | NA | NA | NA | 1-5 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| ALEURITES MOLUCCANUS SEED OIL | 8015-80-3 | NA | NA | 0.1-1.0 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| BHT (BUTYLATED HYDROXYTOLUENE) | 128-37-0 | GO78775000 | 204-881-4 | 0.1-1.0 | 2 | NA | 10 | NF | NF | 10 | NA | NA | | |
| | | | | | Aquatic Acute 1; Aquatic Chronic 1; H400, H410 | | | | | | | | | |
| ALCOHOL | 64-17-5 | KQ6300000 | 200-578-6 | 0.1-1.0 | 1000 | 3000 | 1000 | 1880 | NF | 100 | 3000 | 3300 | | |
| | | | | | Flam. Liq. 2; H225 | | | | | | | | | |
| OLEIC ACID | 112-80-1 | RG2275000 | 204-007-1 | 0.1-1.0 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| GLYCERYL STEARATE | 11099-07-3 | NA | 234-325-6 | 0.1-1.0 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| THEOBROMA GRANDIFLORUM SEED BUTTER | 394236-97-6 | NA | NA | 0.1-1.0 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| ASCORBYL PALMITATE | 137-66-6 | NA | 205-305-4 | 0.0-0.1 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| TOCOPHEROL | 54-28-4 | NA | 200-201-5 | 0.0-0.1 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| | | | | | Aquatic Chronic 4; H413 | | | | | | | | | |


3. COMPOSITION & INGREDIENT INFORMATION – cont'd

| CHEMICAL NAME(S) | CAS No. | RTECS No. | EINECS No. | % | EXPOSURE LIMITS IN AIR (mg/m ³) | | | | | | | | | OTHER |
|------------------------------------|------------|-----------|------------|---------|---|------|--------|---------|---------|------|------|------|--|-------|
| | | | | | ACGIH | | NOHSC | | | OSHA | | | | |
| | | | | | ppm | | ppm | | | ppm | | | | |
| | | | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | | |
| RICINUS COMMUNIS (CASTOR) SEED OIL | 8001-79-4 | F14100000 | 232-293-8 | 0.0-0.1 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| CAMELLIA SINESIS LEAF EXTRACT | 84650-60-2 | NA | 283-935-9 | 0.0-0.1 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| CI 19140 (YELLOW 5) | 12225-21-7 | NA | 235-428-9 | 0.0-0.1 | NA | NA | NF | NF | NF | NA | NA | NA | | |

4. FIRST AID MEASURES

| | | | | | | | | | | | | | |
|-----------------------------|--|--|--|---------------|----------|---------------------|----------|-------------------------|----------|-----------------------------|----------|-------------|--|
| 4.1 | First Aid: | <p><u>Ingestion:</u> 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.</p> <p><u>Eyes:</u> 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.</p> <p><u>Skin:</u> 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.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once.</p> | | | | | | | | | | | |
| 4.2 | Effects of Exposure: | <p><u>Ingestion:</u> If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p><u>Eyes:</u> Slightly irritating to the eyes.</p> <p><u>Skin:</u> May be irritating to skin in some sensitive individuals, especially after prolonged contact.</p> <p><u>Inhalation:</u> Inhalation is unlikely; however, vapors of this product may be slightly irritating to some sensitive individuals.</p> | | | | | | | | | | | |
| 4.3 | Symptoms of Overexposure: | Symptoms of overexposure may include redness, itching, and irritation. | | | | | | | | | | | |
| 4.4 | Acute Health Effects: | Redness, itching, and irritation of skin at the site of contact for some sensitive individuals. | | | | | | | | | | | |
| 4.5 | Chronic Health Effects: | No chronic health effects are known, although symptoms and discomfort may occur for several days following overexposure following ingestion. | | | | | | | | | | | |
| 4.6 | Target Organs: | Eyes, Skin. | | | | | | | | | | | |
| 4.7 | Medical Conditions Aggravated by Exposure: | None known. | <table border="1" style="margin: auto; border-collapse: collapse;"> <tr><td style="background-color: blue; color: white; padding: 2px;">HEALTH</td><td style="text-align: center; padding: 2px;">1</td></tr> <tr><td style="background-color: red; color: white; padding: 2px;">FLAMMABILITY</td><td style="text-align: center; padding: 2px;">0</td></tr> <tr><td style="background-color: orange; color: white; padding: 2px;">PHYSICAL HAZARDS</td><td style="text-align: center; padding: 2px;">0</td></tr> <tr><td style="background-color: black; color: white; padding: 2px;">PROTECTIVE EQUIPMENT</td><td style="text-align: center; padding: 2px;">A</td></tr> <tr><td style="background-color: white; padding: 2px;">EYES</td><td style="text-align: center; padding: 2px;"></td></tr> </table> | HEALTH | 1 | FLAMMABILITY | 0 | PHYSICAL HAZARDS | 0 | PROTECTIVE EQUIPMENT | A | EYES | |
| HEALTH | 1 | | | | | | | | | | | | |
| FLAMMABILITY | 0 | | | | | | | | | | | | |
| PHYSICAL HAZARDS | 0 | | | | | | | | | | | | |
| PROTECTIVE EQUIPMENT | A | | | | | | | | | | | | |
| EYES | | | | | | | | | | | | | |

5. FIREFIGHTING MEASURES

| | | | |
|-----|---------------------------|--|---|
| 5.1 | Fire & Explosion Hazards: | This product is non-flammable. However, if involved in a fire, this product may ignite and decompose to carbon monoxide, carbon dioxide and smoke. |  |
| 5.2 | Extinguishing Methods: | Water Fog, Foam, Dry Chemical. | |
| 5.3 | Firefighting Procedures: | As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personnel. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous decomposition products. | |

6. ACCIDENTAL RELEASE MEASURES

| | | |
|-----|---------|---|
| 6.1 | Spills: | <p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment.</p> <p>For <u>small spills</u> (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p> |
|-----|---------|---|

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7. HANDLING & STORAGE INFORMATION

| | | |
|-----|---------------------------|---|
| 7.1 | Work & Hygiene Practices: | Avoid eye contact. |
| 7.2 | Storage & Handling: | 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. |
| 7.3 | Special Precautions: | Spilled material may present a slipping hazard if left unattended. Clean all spills promptly. |

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| | | | | | | | | | | | |
|-----|--|--|-------|------|--------|---------|---------|------|------|------|-------|
| 8.1 | Exposure Limits: ppm (mg/m ³) | | ACGIH | | NOHSC | | | OSHA | | | OTHER |
| | | CHEMICAL NAME(S) | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | |
| | | BHT (BUTYLATED HYDROXYTOLUENE) | 2 | NA | 10 | NF | NF | 10 | NA | NA | |
| | | ALCOHOL | 1000 | 3000 | 1000 | 1880 | NF | 100 | 3000 | 3300 | |
| 8.2 | Ventilation & Engineering Controls: | 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. | | | | | | | | | |
| 8.3 | Respiratory Protection: | None required. | | | | | | | | | |
| 8.4 | Eye Protection: | None required under normal conditions of use. Avoid eye contact. May cause irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), safety glasses with side shields should be used. | | | | | | | | | |
| 8.5 | Hand Protection: | None required under normal conditions of use. May cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon), wear rubber or impervious plastic gloves. | | | | | | | | | |
| 8.6 | Body Protection: | No apron required when handling small quantities. 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. | | | | | | | | | |



9. PHYSICAL & CHEMICAL PROPERTIES

| | | |
|------|---|------------------|
| 9.1 | Appearance: | Golden oil |
| 9.2 | Odor: | NA |
| 9.3 | Odor Threshold: | ND |
| 9.4 | pH: | NA |
| 9.5 | Melting Point/Freezing Point: | ND |
| 9.6 | Initial Boiling Point/Boiling Range: | ND |
| 9.7 | Flashpoint: | Non-flammable |
| 9.8 | Upper/Lower Flammability Limits: | NA/NA |
| 9.9 | Vapor Pressure: | ND |
| 9.10 | Vapor Density: | NA |
| 9.11 | Relative Density: | NA |
| 9.12 | Solubility: | Soluble in water |
| 9.13 | Partition Coefficient (log P _{ow}): | NA |
| 9.14 | Autoignition Temperature: | NA |
| 9.15 | Decomposition Temperature: | NA |
| 9.16 | Viscosity: | NA |
| 9.17 | Other Information: | NA |

10. STABILITY & REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

| | | | | |
|------|-----------------------|---|-----------------|----------------|
| 11.1 | Routes of Entry: | Inhalation: NO | Absorption: YES | Ingestion: YES |
| 11.2 | Toxicity Data: | The 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. | | |
| 11.3 | Acute Toxicity: | See Section 4.4 | | |
| 11.4 | Chronic Toxicity: | See Section 4.5 | | |
| 11.5 | Suspected Carcinogen: | This product contains <u>BHT (Butylated HydroxyToluene)</u> which is not carcinogenic to humans, but is listed as a Group 3 carcinogen by IARC. | | |

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11. TOXICOLOGICAL INFORMATION – cont'd

| | | |
|------|------------------------------|--|
| 11.6 | Reproductive Toxicity: | This product is not reported to produce reproductive toxicity in humans. |
| | Mutagenicity: | This product is not reported to produce mutagenic effects in humans. |
| | Embryotoxicity: | This product is not reported to produce embryotoxic effects in humans. |
| | Teratogenicity: | This product is not reported to produce teratogenic effects in humans. |
| | Reproductive Toxicity: | This product is not reported to produce reproductive effects in humans. |
| 11.7 | Irritancy of Product: | See Section 4.3 |
| 11.8 | Biological Exposure Indices: | NE |
| 11.9 | Physician Recommendations: | Treat symptomatically. |

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS


| | | |
|------|-------------------------|--|
| 13.1 | Waste Disposal: | Dispose of in accordance with federal, state and local regulations. |
| 13.2 | Special Considerations: | Packaging should be emptied as much as possible and after rinsing, sent for recycling. |

14. TRANSPORTATION INFORMATION



The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

| | | |
|------|----------------------|---------------|
| 14.1 | 49 CFR (GND): | NOT REGULATED |
| 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 | SCT (MEXICO): | NOT REGULATED |
| 14.7 | ADGR (AUS): | NOT REGULATED |

15. REGULATORY INFORMATION

| | | | |
|------|-----------------------------------|---|---|
| 15.1 | SARA Reporting Requirements: | This product does not contain any substances subject to SARA Title III, Section 313 reporting requirements. | |
| 15.2 | SARA Threshold Planning Quantity: | There are no specific Threshold Planning Quantities for the components of this product. | |
| 15.3 | TSCA Inventory Status: | The components of this product are listed on the TSCA Inventory. | |
| 15.4 | CERCLA Reportable Quantity (RQ): | NA | |
| 15.5 | Other Federal Requirements: | This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics). | |
| 15.6 | Other Canadian Regulations: | This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. WHMIS D2B (Other Toxic Effects). |  |
| 15.7 | State Regulatory Information: | No ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). | |
| 15.8 | Other Requirements: | NA | |

16. OTHER INFORMATION

| | | | |
|------|----------------------|--|--|
| 16.1 | Other Information: | WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Use only as directed. KEEP OUT OF REACH OF CHILDREN. | |
| 16.2 | Terms & Definitions: | See last page of this Safety Data Sheet. | |
| 16.3 | Disclaimer: | This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & OPI's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition. | |
| 16.4 | Prepared for: | OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 USA Tel: +1 (818) 759-2400 Fax: +1 (818) 759-5776 http://www.opi.com |  |
| 16.5 | Prepared by: | ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com |  |

DEFINITION OF TERMS

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

GENERAL INFORMATION:

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

EXPOSURE LIMITS IN AIR:

| | |
|-------|---|
| ACGIH | American Conference on Governmental Industrial Hygienists |
| 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. |
|-----|--|

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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

| |
|---------------------|
| HEALTH |
| FLAMMABILITY |
| PHYSICAL HAZARDS |
| PERSONAL PROTECTION |

PERSONAL PROTECTION RATINGS:

| | |
|---|--|
| A | |
| B | |
| C | |
| D | |
| E | |
| F | |

| | |
|---|--|
| G | |
| H | |
| I | |
| J | |
| K | |
| X | Consult your supervisor or SOPs for special handling directions. |

| | | | |
|----------------------|-----------------------------------|----------------------------------|---------------------------|
| Safety Glasses | Splash Goggles | Face Shield & Protective Eyewear | Gloves |
| Boots | Synthetic Apron | Protective Clothing & Full Suit | Dust Respirator |
| Full Face Respirator | Dust & Vapor Half-Mask Respirator | Full Face Respirator | Airline Hood/Mask or SCBA |

OTHER STANDARD ABBREVIATIONS:

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

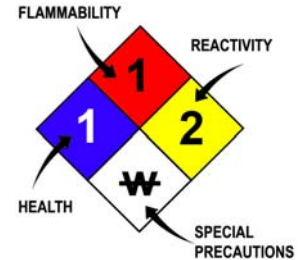
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

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

HAZARD RATINGS:

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



TOXICOLOGICAL INFORMATION:

| | |
|---|---|
| LD ₅₀ | Lethal Dose (solids & liquids) which kills 50% of the exposed animals |
| LC ₅₀ | Lethal concentration (gases) which kills 50% of the exposed animal |
| ppm | Concentration expressed in parts of material per million parts |
| TD ₁₀ | Lowest dose to cause a symptom |
| TCLo | Lowest concentration to cause a symptom |
| TD ₁₀ , LD ₁₀ , & LD ₀ or TC, TC ₀ , LC ₁₀ , & LC ₀ | Lowest dose (or concentration) to cause lethal or toxic effects |
| IARC | International Agency for Research on Cancer |
| NTP | National Toxicology Program |
| RTECS | Registry of Toxic Effects of Chemical Substances |
| BCF | Bioconcentration Factor |
| TL _m | Median threshold limit |
| log K _{ow} or log K _{oc} | Coefficient of Oil/Water Distribution |

REGULATORY INFORMATION:

| | |
|-------|--|
| WHMIS | Canadian Workplace Hazardous Material Information System |
| DOT | U.S. Department of Transportation |
| TC | Transport Canada |
| EPA | U.S. Environmental Protection Agency |
| DSL | Canadian Domestic Substance List |
| NDSL | Canadian Non-Domestic Substance List |
| PSL | Canadian Priority Substances List |
| TSCA | U.S. Toxic Substance Control Act |
| EU | European Union (European Union Directive 67/548/EEC) |
| WGK | Wassergefährdungsklassen (German Water Hazard Class) |

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

| | | | | | | | |
|------------|-----------|-----------|----------|------------|------------|-----------|----------|
| | | | | | | | |
| Class A | Class B | Class C | Class D1 | Class D2 | Class D3 | Class E | Class F |
| Compressed | Flammable | Oxidizing | Toxic | Irritation | Infectious | Corrosive | Reactive |

EC (67/548/EEC) INFORMATION:

| | | | | | | | |
|-----------|-----------|-----------|---------|-----------|-------|----------|---------|
| | | | | | | | |
| Corrosive | Explosive | Flammable | Harmful | Oxidizing | Toxic | Irritant | Harmful |

CLP/GHS (1272/2008/EC) PICTOGRAMS:

| | | | | | | | | |
|-----------|-----------|----------|-------------|-----------|-------|--------------------|---------------|-------------|
| | | | | | | | | |
| GHS01 | GHS02 | GHS03 | GHS04 | GHS05 | GHS06 | GHS07 | GHS08 | GHS09 |
| Explosive | Flammable | Oxidizer | Pressurized | Corrosive | Toxic | Harmful Irritating | Health Hazard | Environment |