



SAFETY DATA SHEET

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

SDS Revision: 1.1

SDS Revision Date: 9/30/2014

1. PRODUCT & COMPANY IDENTIFICATION

| | | |
|-----|------------------------|---|
| 1.1 | Product Name: | top-rev EXTREME PERFORMANCE OIL SUPPLEMENT |
| 1.2 | Chemical Name: | Petroleum Distillates |
| 1.3 | Synonyms: | GC21802 |
| 1.4 | Trade Names: | top-rev Extreme Performance Oil Supplement |
| 1.5 | Product Use: | Oil Treatment |
| 1.6 | Distributor's Name: | top-rev™ Automotive Performance Products |
| 1.7 | Distributor's Address: | 16027 Brookhurst Street. I-104, Fountain Valley, CA 92708 USA |
| 1.8 | Emergency Phone: | CHEMTREC +1 (703) 527-3887 / +1 (800) 424-9300 |
| 1.9 | Business Phone / Fax: | |

2. HAZARDS IDENTIFICATION

| | | | |
|-----|---------------------------|--|--|
| 2.1 | Hazard Identification: | <p>This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC:1088 (2004) and ADG Code (Australia). In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS.</p> <p>DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAY. CAUSES MILD SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION.</p> <p><u>Hazard Statements (H):</u> H304 – May be fatal if swallowed and enters airways. H316 – Causes mild skin irritation. H319 – Causes serious eye irritation.</p> <p><u>Precautionary Statements (P):</u> P264 - Wash hands and exposed skin areas with soap and warm water thoroughly after handling. P273 – Avoid release to the environment. P280 - Wear gloves and eye protection/face protection. P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P301 - Do NOT induce vomiting. P261 - Avoid breathing mist/sprays. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P337+P313 - If eye irritation persists get medical advice/attention. P272 – Contaminated work clothing should not be allowed out of the workplace. 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 – For specific treatment – see section 4 of this Safety Data Sheet. P363 Wash contaminated clothing before reuse. P391 – Collect spillage. P405 – Store locked up. P501 - Dispose of contents/container to licenses treatment, storage and disposal facility (TSDF).</p> | |
| 2.2 | Effects of Exposure: | <p><u>Eyes:</u> Causes eye irritation.</p> <p><u>Skin:</u> May be harmful if absorbed through skin. Causes skin irritation.</p> <p><u>Ingestion:</u> May be harmful if swallowed. Ingestion can cause a laxative effect. If aspirated into the lungs, liquid can cause severe lung damage or death.</p> <p><u>Inhalation:</u> May be harmful if inhaled. Causes respiratory tract irritation. Aspiration of liquid into the lungs can cause severe lung damage or death.</p> | |
| 2.3 | Symptoms of Overexposure: | <p><u>Eyes:</u> Irritation, redness, and watering.</p> <p><u>Skin:</u> Possible irritation, defatting, or dermatitis (rash), characterized by dry, scaling, red, itching skin.</p> <p><u>Ingestion:</u> Laxative effects. Gastrointestinal discomfort, nausea and headache.</p> <p><u>Inhalation:</u> May cause irritation to the upper respiratory system. Overexposure to sprays or mists may cause chemical pneumonitis.</p> | |
| 2.4 | Acute Health Effects: | Moderate irritation to eyes. Moderate irritation to skin near affected areas. | |
| 2.5 | Chronic Health Effects: | Contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects. | |
| 2.6 | Target Organs: | Lungs, upper respiratory tract, skin, eyes. | |

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 | ppm | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | |
| PETROLEUM DISTILLATES, HYDROTREATED HEAVY PARAFFIN | 64742-54-7 | PY8035501 | 265-157-1 | 60-100 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| MINERAL OIL | NA | NA | NA | 15-40 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| CALCIUM SULFONATE | NA | NA | NA | 7-13 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS | 68649-42-3 | NA | 272-028-3 | 1-5 | NA | NA | NF | NF | NF | NA | NA | NA | | |



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4. FIRST AID MEASURES

| | | | | | | | | | | | | | | |
|-----------------------------|--|---|---------------|----------|---------------------|----------|-------------------------|----------|-----------------------------|----------|-------------|-------------|--|--|
| 4.1 | First Aid: | <p>Ingestion: DO NOT INDUCE VOMITING. Contact the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p>Eyes: If product gets in the eyes, immediately flush eyes thoroughly with copious amounts of water for at least 20 minutes, holding eyelid(s) open to ensure complete flushing. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>Skin: If irritation occurs & product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with plenty of soap and water. Remove all contaminated clothing, including footwear and wash thoroughly before reuse. If irritation, redness or swelling persists, consult a physician immediately.</p> <p>Inhalation: Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention.</p> | | | | | | | | | | | | |
| 4.2 | Medical Conditions Aggravated by Exposure: | <p>Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).</p> <table border="1" data-bbox="1055 577 1531 735"> <tr><td>HEALTH</td><td>1</td></tr> <tr><td>FLAMMABILITY</td><td>1</td></tr> <tr><td>PHYSICAL HAZARDS</td><td>0</td></tr> <tr><td>PROTECTIVE EQUIPMENT</td><td>B</td></tr> <tr><td>EYES</td><td>SKIN</td><td></td><td></td></tr> </table> | HEALTH | 1 | FLAMMABILITY | 1 | PHYSICAL HAZARDS | 0 | PROTECTIVE EQUIPMENT | B | EYES | SKIN | | |
| HEALTH | 1 | | | | | | | | | | | | | |
| FLAMMABILITY | 1 | | | | | | | | | | | | | |
| PHYSICAL HAZARDS | 0 | | | | | | | | | | | | | |
| PROTECTIVE EQUIPMENT | B | | | | | | | | | | | | | |
| EYES | SKIN | | | | | | | | | | | | | |

5. FIREFIGHTING MEASURES

| | | | |
|-----|---------------------------|--|--|
| 5.1 | Fire & Explosion Hazards: | Avoid all ignition sources such as sparks, heat and open flames. If involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO ₂ , and NO _x), smoke, hydrocarbons and their derivatives and other toxic pyrolysis products. | |
| 5.2 | Extinguishing Methods: | Water, Foam, CO ₂ , Dry Chemical, low velocity water fog, Halon (if permitted), | |
| 5.3 | Firefighting Procedures: | As with any fire, firefighters should wear appropriate protective equipment including a MSHA/NIOSH approved or equivalent self-contained breathing apparatus (SCBA) and protective clothing. Treat as hot oil. Hazardous decomposition products may be released. Thermal degradation may produce oxides of carbon, and/or nitrogen, hydrocarbons and/or derivatives. Fire should be fought from a safe distance. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. | |

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 (PPE). Use safety glasses or safety goggles and face shield; use gloves and other protective clothing (e.g., apron, boots, etc.) to prevent skin contact.</p> <p>Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible, inert material such as vermiculite or sand to soak up the product and place into a container for later disposal.</p> <p>Large Spills: Keep incompatible materials (e.g., oxidizers, strong acids, alkalis) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant. Recover as much free liquid as possible and collect in acid-resistant container. Use absorbent to pick up residue. Avoid discharging liquid directly into a sewer or surface waters.</p> |
|-----|---------|---|

7. HANDLING & STORAGE INFORMATION

| | | |
|-----|---------------------------|--|
| 7.1 | Work & Hygiene Practices: | Avoid breathing mists or spray. Avoid eye and skin contact. Wear protective equipment when handling product. Keep out of the reach of children. Do not eat, drink or smoke when handling this product. Wash thoroughly after handling. Do not expose to heat and flame. Use only in ventilated areas. Immediately clean-up and decontaminate any spills or residues. |
| 7.2 | Storage & Handling: | Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Store in closed containers. Avoid temperatures above 40°C (120°F). Keep away from incompatible substances (see Section 10). Protect containers from physical damage. |
| 7.3 | Special Precautions: | Open containers slowly on a stable surface. Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Follow all instructions on product label. Keep container closed when not in use. Keep this and all chemicals out of reach of children. |



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8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| | | | |
|-----|-------------------------------------|---|---|
| 8.1 | Ventilation & Engineering Controls: | Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station). | |
| 8.2 | Respiratory Protection: | No special respiratory protection is required under typical circumstances of use or handling. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia. | |
| 8.3 | Eye Protection: | Avoid eye contact. Safety glasses with side shields must be used when handling or using this product. A protective face shield is also recommended. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). |  |
| 8.4 | Hand Protection: | Wear protective, chemical-resistant gloves (e.g., neoprene, nitrile) when using or handling this product. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. |  |
| 8.5 | Body Protection: | Not required under normal conditions of use. A chemical resistant apron and/or protective clothing are recommended when handling or using large quantities (e.g., > 5 gallons (18.9 L)) of this product. Protective working garments should meet EU Standard EN 344 or equivalent. | |

9. PHYSICAL & CHEMICAL PROPERTIES

| | | |
|------|---|---|
| 9.1 | Appearance: | Amber oily liquid |
| 9.2 | Odor: | Petroleum oil odor |
| 9.3 | Odor Threshold: | NA |
| 9.4 | pH: | NA |
| 9.5 | Melting Point/Freezing Point: | NA |
| 9.6 | Initial Boiling Point/Boiling Range: | NA |
| 9.7 | Flashpoint: | > 160 °C (> 320 °F) |
| 9.8 | Upper/Lower Flammability Limits: | NA |
| 9.9 | Vapor Pressure: | NA |
| 9.10 | Vapor Density: | NA |
| 9.11 | Relative Density: | 0.899 g/cm ³ @ 20 °C (68 °F) |
| 9.12 | Solubility: | NA |
| 9.13 | Partition Coefficient (log P _{ow}): | 3.9 – 6.0 (mineral oil) |
| 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: | Stable at normal temperatures. |
| 10.2 | Hazardous Decomposition Products: | Reaction with organics and strong reducing agents can produce toxic fumes and nitrogen and carbon oxides. |
| 10.3 | Hazardous Polymerization: | Will not occur. |
| 10.4 | Conditions to Avoid: | Excessive heat, and incompatible materials. |
| 10.5 | Incompatible Substances: | Strong reducing agents, acids, and oxidizers. |



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11. TOXICOLOGICAL INFORMATION

| | | | | |
|------|------------------------------|---|-----------------|----------------|
| 11.1 | Routes of Entry: | Inhalation: NO | Absorption: YES | Ingestion: YES |
| 11.2 | Toxicity Data: | Petroleum Distillates, Hydrotreated Heavy Paraffin: LD ₅₀ (oral, rat): 5,000 mg/kg; Phosphorodithioic Acid, O,O-Di-C1-14-Alkyl Esters, Zinc Salts: LD ₅₀ (oral, rat): 2,000 mg/kg; Calcium Sulfonate: LD ₅₀ (oral, rat): 2,000 mg/kg | | |
| 11.3 | Acute Toxicity: | See section 2.4. Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. | | |
| 11.4 | Chronic Toxicity: | See section 2.5 | | |
| 11.5 | Suspected Carcinogen: | No. DMSO extract by IP346: Less than 3.0 wt % (mineral oil component only) | | |
| 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 2.3 | | |
| 11.8 | Biological Exposure Indices: | ND | | |
| 11.9 | Physician Recommendations: | Treat symptomatically. | | |

12. ECOLOGICAL INFORMATION

| | | |
|------|------------------------------|--|
| 12.1 | Environmental Stability: | There is no specific data available for this product |
| 12.2 | Effects on Plants & Animals: | There is no specific data available for this product. |
| 12.3 | Effects on Aquatic Life: | Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway can result in a loss of marine life or create an anaerobic environment. This material contains phosphorus which is a controlled element for disposal in effluent waters in most sections of North America. Phosphorus is known to enhance the formation of algae. Severe algae growth can reduce oxygen content in the water possibly below levels necessary to support marine life. |

13. DISPOSAL CONSIDERATIONS

| | | |
|------|-------------------------|---|
| 13.1 | Waste Disposal: | Dispose of in accordance with federal, state, provincial and local regulations. The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. Dispose of surplus and non-recyclable products through a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should, at all times, comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. |
| 13.2 | Special Considerations: | Used oil may be recyclable. Contact the federal, state or provincial environmental authority to determine suitability for recycling and or proper disposal requirements. If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local statute. |

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 |





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15. REGULATORY INFORMATION

| | | |
|------|-----------------------------------|--|
| 15.1 | SARA Reporting Requirements: | This product contains Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts, a substance 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 material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA. |
| 15.6 | Other Canadian Regulations: | This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS 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 (CA), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). |
| 15.8 | Other Requirements: | The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC. Irritant (Xi). <u>Risk Phrases</u> (R): R36/37/38-65-66 – Irritating to eyes, respiratory system and skin. Harmful – may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. <u>Safety Phrases</u> (S): S(2)-23-24-62 - Keep out of the reach of children. Do not breathe the mists/vapors/spray. Avoid contact with skin. If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label where possible.  |

16. OTHER INFORMATION

| | | | |
|------|----------------------|---|--|
| 16.1 | Other Information: | DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAY. CAUSES MILD SKIN IRRITATION. CAUSES SERIOUS EYE IRRITATION. Wash hands and exposed skin areas with soap and warm water thoroughly after handling. Wear gloves and eye protection/face protection. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Avoid breathing mist/sprays. 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 ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. 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 & QuickAct'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: | top-rev™ Automotive Performance Products 16027 Brookhurst Street, I-104 Fountain Valley, CA 92708 USA Tel: +1 (888) 212-1911 |  |
| 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 |  |



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DEFINITION OF TERMS

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

GENERAL INFORMATION:

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

EXPOSURE LIMITS IN AIR:

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

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:

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

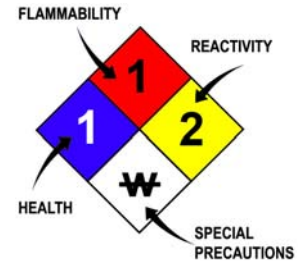
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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:

| | |
|--|---|
| C | Ceiling Limit |
| 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 ₀₁ | Lowest dose to cause a symptom |
| TCLo | Lowest concentration to cause a symptom |
| TD ₀₁ , LD ₀₁ , & LD ₀₂ or TC, TC ₀₁ , LC ₀₁ , & LC ₀₂ | 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:

| | | | | | | | |
|-----------|-----------|-----------|---------|-----------|---------|----------|----------|
| | | | | | | | |
| Class C | Class E | Class F | Class N | Class O | Class T | Class Xi | Class Xn |
| Corrosive | Explosive | Flammable | Harmful | Oxidizing | Toxic | Irritant | Harmful |

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

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