

# SAFETY DATA SHEET

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


SDS Revision: 1.0

SDS Revision Date: 5/13/2015

## 1. PRODUCT & COMPANY IDENTIFICATION

|     |                              |   |
|-----|------------------------------|---|
| 1.1 | Product Name:                | <b>PNEUMATIC ROLLER SEAT</b>  |
| 1.2 | Chemical Name:               | Hydraulic Oil   |
| 1.3 | Synonyms:                    | P/N 46319   |
| 1.4 | Trade Names:                 | Pittsburgh Automotive   |
| 1.5 | Product Uses & Restrictions: | Hydraulic Oil   |
| 1.6 | Distributor's Name:          | Harbor Freight Tools USA, Inc.                                      |
| 1.7 | Distributor's Address:       | 26541 Agoura Road, Calabasas, CA 91302 USA                          |
| 1.8 | Emergency Phone:             | <b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687)</b> |
| 1.9 | Business Phone / Fax:        | +1 (805) 388-1000   |

## 2. HAZARDS IDENTIFICATION

|     |                        |  |   |
|-----|------------------------|--|---|
| 2.1 | Hazard Identification: | <p>This product is classified as a <b>HAZARDOUS SUBSTANCE</b> but not as <b>DANGEROUS GOODS</b> according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia).</p> <p><b>DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.</b></p> <p><u>Classification:</u> Asp. Tox. 1</p> <p><u>Hazard Statements (H):</u> H304 – May be fatal if swallowed and enters airways.</p> <p><u>Precautionary Statements (P):</u> P280 – Wear protective gloves/eye protection. P301+P310 – IF SWALLOWED: Immediately call a POISON CENTER/doctor. P331 – Do NOT induce vomiting. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P405 – Store locked up. P501 – Dispose of contents/ container to an approved waste disposal plant.</p> |  |
|-----|------------------------|--|---|

## 3. COMPOSITION & INGREDIENT INFORMATION

| CHEMICAL NAME(S)                       | CAS No.          | RTECS No. | EINECS No. | %      | EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> ) |      |        |         |         |      |      |      |          |
|--|------------------|-----------|------------|--------|---|------|--------|---------|---------|------|------|------|----------|
|  |                  |           |            |        | ACGIH                                       |      | NOHSC  |         |         | OSHA |      |      | OTHER    |
|  |                  |           |            |        | ppm   |      | ppm    |         |         | ppm  |      |      |          |
|  |                  |           |            |        | TLV   | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL  | STEL | IDLH |          |
| DISTILLATES (PETROLEUM),<br>PARAFFINIC | 64741-51-4       | NA        | NA         | 60-100 | NA  | 5    | 5      | NF      | NF      | 5    | NA   | NA   | OIL MIST |
|  | Asp. Tox.1; H304 |           |            |        |   |      |        |         |         |      |      |      |          |


## 4. FIRST AID MEASURES

|     |                           |  |
|-----|---------------------------|--|
| 4.1 | First Aid:                | <p><u>Ingestion:</u> <b>DO NOT INDUCE VOMITING.</b> Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p><u>Eyes:</u> If product gets in the eyes, flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If the eyes or face become swollen during or following use, consult a physician or emergency room immediately.</p> <p><u>Skin:</u> Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.</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> May cause transient mild-eye irritation with short-term contact with liquid, spray or mist.</p> <p><u>Skin:</u> This product can cause mild, transient skin irritation with short-term exposure. This product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.</p> <p><u>Inhalation:</u> No significant adverse health effects are expected to occur upon short-term exposure to this product. Aspiration of liquid into the lungs can cause severe lung damage or death. Drowsiness, dizziness, headaches and nausea.</p>   |
| 4.3 | Symptoms of Overexposure: | <p><u>Eyes:</u> Overexposure in eyes may cause redness, itching and watering.</p> <p><u>Skin:</u> Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.</p>   |
| 4.4 | Acute Health Effects:     | Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.   |
| 4.5 | 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.   |
| 4.6 | Target Organs:            | Eyes, Skin, Respiratory System, Central Nervous System (CNS).  |

## 4. FIRST AID MEASURES – cont'd

|     |  |  |                             |             |              |
|-----|--|--|-----------------------------|-------------|--------------|
| 4.7 | Medical Conditions Aggravated by Exposure: | Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system). | <b>HEALTH</b>               |             | <b>1</b>     |
|     |  |  | <b>FLAMMABILITY</b>         |             | <b>1</b>     |
|     |  |  | <b>PHYSICAL HAZARDS</b>     |             | <b>0</b>     |
|     |  |  | <b>PROTECTIVE EQUIPMENT</b> |             | <b>X</b>     |
|     |  |  | <b>EYES</b>                 | <b>SKIN</b> | <b>LUNGS</b> |

## 5. FIREFIGHTING MEASURES

|     |                           |  |   |
|-----|---------------------------|--|---|
| 5.1 | Fire & Explosion Hazards: | This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point. Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and nitrogen. Also, depending upon the conditions of use, low concentrations of hydrogen sulfide can be released.          |  |
| 5.2 | Extinguishing Methods:    | Dry Chemical, Foam, Carbon Dioxide, Water Fog.   |   |
| 5.3 | Firefighting Procedures:  | Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boil over. 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 combustion or decomposition products and oxygen deficiencies. |   |

## 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., &lt; 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</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). Use <b>ONLY</b> non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water.</p> |
|-----|---------|--|

## 7. HANDLING & STORAGE INFORMATION

|     |                           |   |
|-----|---------------------------|---|
| 7.1 | Work & Hygiene Practices: | Use normal hygiene practices. Avoid breathing vapors. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking.  |
| 7.2 | Storage & Handling:       | Use and store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Do not store in unmarked containers or storage devices.<br>Recommended maximum shelf life: 36 months. |
| 7.3 | Special Precautions:      | Empty containers may contain product residue. Do not pressurize, cut, heat or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.   |

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| 8.1 | Exposure Limits:<br>ppm (mg/m <sup>3</sup> ) | ACGIH   |  | NOHSC |      |        | OSHA    |         |     | OTHER |      |          |
|-----|--|---|--|-------|------|--------|---------|---------|-----|-------|------|----------|
|     |  | CHEMICAL NAME(S)  |  | TLV   | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL  | IDLH |          |
|     |  | DISTILLATES (PETROLEUM),<br>PARAFFINIC  |  | NA    | 5    | 5      | NF      | NF      | 5   | NA    | NA   | OIL MIST |
| 8.2 | Ventilation & Engineering Controls:          | The use of mechanical dilution ventilation is recommended to maintain airborne concentrations below the recommended occupational exposure limits, whenever this material is used in a confined space, is heated above normal temperatures (up to 38 °C) or is agitated.   |  |       |      |        |         |         |     |       |      |          |
| 8.3 | Respiratory Protection:                      | Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist pre-filter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). |  |       |      |        |         |         |     |       |      |          |
| 8.4 | Eye Protection:                              | Wear protective eyewear (e.g., safety glasses with side-shield) at all times when handling this product. Always use protective eyewear when cleaning spills or leaks. Wear goggles and/or face shield if splashing or spraying is anticipated. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants. Have suitable eye wash water available. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).                                       |  |       |      |        |         |         |     |       |      |          |





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## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd

|     |                  |  |   |
|-----|------------------|--|---|
| 8.5 | Hand Protection: | Use gloves constructed of chemical-resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, or the EU member states.   |  |
| 8.6 | Body Protection: | Avoid prolonged and/or repeated skin contact. Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing should include long-sleeves, apron, boots and additional facial protection. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA. |  |

## 9. PHYSICAL & CHEMICAL PROPERTIES

|      |   |  |
|------|---|--|
| 9.1  | Appearance:                                   | Clear liquid                             |
| 9.2  | Odor:   | Characteristic mild petroleum odor       |
| 9.3  | Odor Threshold:                               | NA                                       |
| 9.4  | pH:   | NA                                       |
| 9.5  | Melting Point/Freezing Point:                 | Pour Point: -44.0 °C                     |
| 9.6  | Initial Boiling Point/Boiling Range:          | NA                                       |
| 9.7  | Flashpoint:                                   | > 150 °C (> 302 °F)                      |
| 9.8  | Upper/Lower Flammability Limits:              | LEL: 0.9%; UEL: 7.0%                     |
| 9.9  | Vapor Pressure:                               | NA                                       |
| 9.10 | Vapor Density:                                | NA                                       |
| 9.11 | Relative Density:                             | 0.8337 g/cm <sup>3</sup> @ 15 °C (59 °F) |
| 9.12 | Solubility:                                   | Insoluble                                |
| 9.13 | Partition Coefficient (log P <sub>ow</sub> ): | NA                                       |
| 9.14 | Autoignition Temperature:                     | NA                                       |
| 9.15 | Decomposition Temperature:                    | NA                                       |
| 9.16 | Viscosity:                                    | 15.21 @ 40 °C SUS; 2.28 @ 100 °C         |
| 9.17 | Other Information:                            | NA                                       |

## 10. STABILITY & REACTIVITY

|      |                                   |   |
|------|-----------------------------------|---|
| 10.1 | Stability:                        | Stable at normal temperatures.  |
| 10.2 | Hazardous Decomposition Products: | Fumes, smoke, carbon monoxide, silicon oxides.                                  |
| 10.3 | Hazardous Polymerization:         | Will not occur.   |
| 10.4 | Conditions to Avoid:              | Open flames, sparks, high heat, and close proximity to incompatible substances. |
| 10.5 | Incompatible Substances:          | Strong oxidizing agents.  |

## 11. TOXICOLOGICAL INFORMATION

|      |                              |  |                 |                |
|------|------------------------------|--|-----------------|----------------|
| 11.1 | Routes of Entry:             | Inhalation: NO   | Absorption: YES | Ingestion: YES |
| 11.2 | Toxicity Data:               | This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product and is presented below:<br>Based on animal testing from similar materials & products, the acute toxicity of this product is expected to be: <u>Distillates, Petroleum, Paraffinic</u> – LD <sub>50</sub> (oral, rat) > 5,000 mg/kg; LD <sub>50</sub> (dermal, rabbit) > 2,000 mg/kg.  |                 |                |
| 11.3 | Acute Toxicity:              | 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, lipid granuloma formation and lipid 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:            | NA   |                 |                |
| 11.5 | Suspected Carcinogen:        | NA   |                 |                |
| 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.   |                 |                |

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## 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, provincial and local regulations. |
| 13.2 | Special Considerations: | NA  |

## 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 or are otherwise exempt.  |
| 15.4 | CERCLA Reportable Quantity (RQ):  | NA  |
| 15.5 | Other Federal Requirements:       | None of the ingredients are listed as Hazardous Air Pollutants (HAPs). None of the ingredients are listed as Toxic Pollutants under the Clean Water Act (CWA). None of the ingredients are listed as Priority Pollutants under the Clean Water Act (CWA). This product does not contain any Class 1 or Class 2 ozone depleters.   |
| 15.6 | Other Canadian Regulations:       | This product has been classified according to the hazard criteria of the CPR and the SDS 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. 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:               | The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: <u>Distillates (Petroleum), Paraffinic</u> : Harmful (Xn). <u>Risk Phrases (R)</u> : 65 – Harmful: may cause lung damage if swallowed. <u>Safety Phrases (S)</u> : 53-45 – Avoid exposure – obtain special instructions before use. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).    |

## 16. OTHER INFORMATION

|      |                      |   |   |
|------|----------------------|---|---|
| 16.1 | Other Information:   | <b>DANGER! MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.</b> Wash exposed skin areas thoroughly with soap and water after handling. Avoid eye contact. Wear protective gloves/eye protection/face protection. IF ON SKIN: Wash with soap and water. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation or a rash occurs – Get medical advice/attention. Store in a well-ventilated place. Keep cool. Use only as directed. <b>KEEP OUT OF REACH OF CHILDREN.</b>   |   |
| 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 & Harbor Freight Tools USA, Inc.'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:        | <b>Harbor Freight Tools USA, Inc.</b><br>26541 Agoura Road<br>Calabasas, CA 91302 USA<br>Tel: +1 (805) 388-1000<br><a href="http://www.harborfreight.com/">http://www.harborfreight.com/</a>  | <b>HARBOR FREIGHT TOOLS</b><br>Quality Tools at Ridiculously Low Prices |
| 16.5 | Prepared by:         | <b>ShipMate, Inc.</b><br>P.O. Box 787<br>Sisters, Oregon 97759-0787 USA<br>Tel: +1 (310) 370-3600<br>Fax: +1 (310) 370-5700<br><a href="http://www.shipmate.com">http://www.shipmate.com</a>  |   |

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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:

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

### EXPOSURE LIMITS IN AIR:

|              |   |
|--------------|---|
| <b>ACGIH</b> | American Conference on Governmental Industrial Hygienists |
| <b>C</b>     | Ceiling Limit   |
| <b>ES</b>    | Exposure Standard (Australia)                             |
| <b>IDLH</b>  | Immediately Dangerous to Life and Health                  |
| <b>OSHA</b>  | U.S. Occupational Safety and Health Administration        |
| <b>PEL</b>   | Permissible Exposure Limit                                |
| <b>STEL</b>  | Short-Term Exposure Limit                                 |
| <b>TLV</b>   | Threshold Limit Value                                     |
| <b>TWA</b>   | Time Weighted Average                                     |

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

### HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

|          |                 |                            |
|----------|-----------------|----------------------------|
| <b>0</b> | Minimal Hazard  | <b>HEALTH</b>              |
| <b>1</b> | Slight Hazard   | <b>FLAMMABILITY</b>        |
| <b>2</b> | Moderate Hazard | <b>PHYSICAL HAZARDS</b>    |
| <b>3</b> | Severe Hazard   | <b>PERSONAL PROTECTION</b> |
| <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 SOPs for special handling directions. |
| <div>  Safety Glasses                              Splash Goggles                              Face Shield &amp; Protective Eyewear                              Gloves                         </div> <div>  Boots                              Synthetic Apron                              Protective Clothing &amp; Full Suit                              Dust Respirator                         </div> <div>  Full Face Respirator                              Dust &amp; Vapor Half-Mask Respirator                              Full Face Respirator                              Airline Hood/Mask or SCBA                         </div> |  |          |  |

### OTHER STANDARD ABBREVIATIONS:

|              |                                    |
|--------------|------------------------------------|
| <b>ML</b>    | Maximum Limit                      |
| <b>mg/m3</b> | milligrams per cubic meter         |
| <b>NA</b>    | Not Available                      |
| <b>ND</b>    | Not Determined                     |
| <b>NE</b>    | Not Established                    |
| <b>NF</b>    | Not Found                          |
| <b>NR</b>    | No Results                         |
| <b>ppm</b>   | parts per million                  |
| <b>SCBA</b>  | Self-Contained Breathing Apparatus |

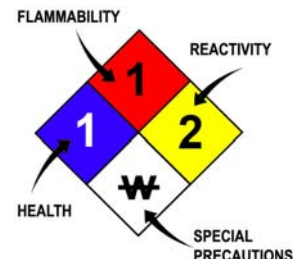
### NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

#### 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        |
| <b>TREFOIL</b> | Radioactive     |



### 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>50</sub> or TC, TC<sub>50</sub>, LC<sub>10</sub>, &amp; LC<sub>50</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>NOHSC</b>    | National Occupational Health and Safety Commission (Australia)                  |
| <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)                            |
| <b>WGK</b>      | Wassergefährdungsklassen (German Water Hazard Class)                            |
| <b>HMIS-III</b> | National Paint & Coatings Association Hazardous Materials Identification System |

### 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:

|           |           |           |         |           |       |          |         |
|-----------|-----------|-----------|---------|-----------|-------|----------|---------|
|           |           |           |         |           |       |          |         |
| C         | E         | F         | N       | O         | T     | Xi       | 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 |