

SAFETY DATA SHEET

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


SDS Revision: 1.1

SDS Revision Date: 7/28/2015

1. PRODUCT & COMPANY IDENTIFICATION

| | | |
|-----|------------------------------|--|
| 1.1 | Product Name: | THREADLOCKER, NO 42, 10 ML MEDIUM STRENGTH |
| 1.2 | Chemical Name: | Poly(Ethylene Glycol) Dimethacrylate Solution |
| 1.3 | Synonyms: | P/N 65192 |
| 1.4 | Trade Names: | Harbor Freight Tools |
| 1.5 | Product Uses & Restrictions: | Threadlocker |
| 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: | CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 676687) |
| 1.9 | Business Phone / Fax: | +1 (805) 388-1000 |

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).</p> <p>WARNING! CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.</p> <p><u>Classification:</u> Skin Irrit.2; Skin Sens. 1B; Eye Irrit. 2a; STOT SE 3</p> <p><u>Hazard Statements (H):</u> H315 – Causes skin irritation. H317 – May cause an allergic skin reaction. H319 – Causes serious eye irritation. H335 – May cause respiratory irritation.</p> <p><u>Precautionary Statements (P):</u> P210 – Keep away from heat/sparks/open flame/hot surfaces – No Smoking. P233 – Keep container tightly closed. P261 – Avoid breathing fume/ mist/vapors/spray. P264 – Wash exposed skin areas thoroughly with soap and water after handling. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 – IF ON SKIN: Wash with soap and water. P305+P351+P338 – IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P333+P313 – If skin irritation or a rash occurs – Get medical advice/attention. P321 – For specific first aid treatment (see Section 4 of this Safety Data Sheet). P363 – Wash contaminated clothing before reuse. P370+P378 – In case of fire, CO₂, Halon (if permitted), dry chemical, or foam for extinction. P403+P235 – Store in a well-ventilated place. Keep cool. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).</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 | | | | |
| | | | | | ppm | | ppm | | | ppm | | | | |
| | | | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | | |
| POLY(ETHYLENE GLYCOL) DIMETHACRYLATE | 25852-47-5 | NA | NA | 60-65 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| POLYGLYCOL OLEATE | 9904-96-0 | NA | NA | 25-30 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| SACCHARIN | 81-07-2 | DE4200000 | 201-321-0 | 3-5 | NA | NA | NF | NF | NF | NA | NA | NA | | |
| SILICON DIOXIDE | 112945-52-5 | VV7310000 | 231-545-4 | 1-3 | (6) | NA | NF | NF | NF | (6) | NA | NA | RESP FRAC | |
| CUMENE HYDROPEROXIDE | 80-15-9 | MX2450000 | 201-254-7 | 1-3 | NA | NA | NF | NF | NF | NA | NA | NA | 1 WEEL | |
| | Flam. Liq. 4; Org. Perox. E; Acute Tox. 4; Acute Tox. 3; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; STOT RE 2; Aquatic Acute 2; Aquatic Chronic 2; H227, H242, H302 + H312, H314, H318, H331, H373, H411 | | | | | | | | | | | | | |

4. FIRST AID MEASURES

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| 4.1 | First Aid: | <p><u>Ingestion:</u> If ingested, do not induce vomiting. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p><u>Eyes:</u> Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally.</p> <p><u>Skin:</u> Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once. If breathing is difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.</p> |
|-----|------------|--|

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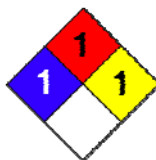
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4. FIRST AID MEASURES – cont'd

| | | | | | | | | | | | | | | | | | |
|----------------------|--|--|--------|--|---|--------------|--|---|------------------|--|---|----------------------|--|---|------|------|--|
| 4.2 | Effects of Exposure: | <p><u>Ingestion:</u> If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression.</p> <p><u>Eyes:</u> Vapor of this product may be mildly to moderately irritation to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p><u>Skin:</u> May be irritating to skin in some sensitive individuals, especially after prolonged or repeated skin contact. May bond skin to clothing and release heat, causing burns.</p> <p><u>Inhalation:</u> Inhalation of vapors is unlikely under normal conditions of use. Vapors of this product may be slightly irritating to the nose, throat and other tissues of the respiratory system. Symptoms of overexposure can include coughing, wheezing, nasal congestion, and difficulty breathing. Inhalation of vapors exceeding the levels listed in Section 3 (Composition and Ingredient Information) can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).</p> | | | | | | | | | | | | | | | |
| 4.3 | Symptoms of Overexposure: | Symptoms of skin overexposure in some sensitive individuals may include redness, itching, and irritation of affected areas. Overexposure of vapor in eyes may cause redness, itching and watering. | | | | | | | | | | | | | | | |
| 4.4 | Acute Health Effects: | Mild to moderate irritation to skin near affected areas. Vapor of this product may be mildly to moderately irritating to the eyes and mucous membranes. Symptoms of overexposure may include redness, itching, irritation and watering. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. | | | | | | | | | | | | | | | |
| 4.5 | Chronic Health Effects: | None known. | | | | | | | | | | | | | | | |
| 4.6 | Target Organs: | Eyes, Skin, Respiratory System. | | | | | | | | | | | | | | | |
| 4.7 | Medical Conditions Aggravated by Exposure: | Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory) | | | | | | | | | | | | | | | |
| | | <table><tr><td colspan="2">HEALTH</td><td>1</td></tr><tr><td colspan="2">FLAMMABILITY</td><td>1</td></tr><tr><td colspan="2">PHYSICAL HAZARDS</td><td>1</td></tr><tr><td colspan="2">PROTECTIVE EQUIPMENT</td><td>B</td></tr><tr><td>EYES</td><td>SKIN</td><td></td></tr></table> | HEALTH | | 1 | FLAMMABILITY | | 1 | PHYSICAL HAZARDS | | 1 | PROTECTIVE EQUIPMENT | | B | EYES | SKIN | |
| HEALTH | | 1 | | | | | | | | | | | | | | | |
| FLAMMABILITY | | 1 | | | | | | | | | | | | | | | |
| PHYSICAL HAZARDS | | 1 | | | | | | | | | | | | | | | |
| PROTECTIVE EQUIPMENT | | B | | | | | | | | | | | | | | | |
| EYES | SKIN | | | | | | | | | | | | | | | | |

5. FIREFIGHTING MEASURES

| | | | |
|-----|---------------------------|--|---|
| 5.1 | Fire & Explosion Hazards: | This material can burn but will not readily ignite. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO _x , Hydrocarbons). |  |
| 5.2 | Extinguishing Methods: | CO ₂ , Dry Chemical, Halon (if permitted), Alcohol Foam. Use water spray to cool containers. | |
| 5.3 | Firefighting Procedures: | Keep containers cool until well after the fire is out. Fight fires as for surrounding materials. 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 personal. Fight fire upwind. 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., < 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 ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of drains, municipal sewers and open bodies of water.</p> |
|-----|---------|---|

7. HANDLING & STORAGE INFORMATION

| | | |
|-----|---------------------------|--|
| 7.1 | Work & Hygiene Practices: | Avoid prolonged or repeated skin contact. Avoid breathing vapors of this product. Use eye protection when using this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap & water. Do not eat, drink or smoke while handling product. |
| 7.2 | Storage & Handling: | Open containers slowly on a stable surface. Keep container closed tightly when not in use. Empty container may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, other light sources, or sources of intense heat. Store away from incompatible materials (see Section 10, Stability and Reactivity). |
| 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. |

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8. EXPOSURE CONTROLS & PERSONAL PROTECTION

| 8.1 | Exposure Limits: ppm (mg/m ³) | CHEMICAL NAME(S) | ACGIH | | NOHSC | | | OSHA | | | OTHER |
|-----|--|---|-------|------|--------|---------|---------|------|------|------|-----------|
| | | | TLV | STEL | ES-TWA | ES-STEL | ES-PEAK | PEL | STEL | IDLH | |
| | | SILICON DIOXIDE | (6) | NA | NF | NF | NF | (6) | NA | NA | RESP FRAC |
| | | CUMENE HYDROPEROXIDE | NA | NA | NF | NF | NF | NA | NA | NA | 1 WEEL |
| 8.2 | Ventilation & Engineering Controls: | General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. 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). | | | | | | | | | |
| 8.3 | Respiratory Protection: | No special respiratory protection is required under typical circumstances of use or handling. In instances where mist or vapors 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. | | | | | | | | | |
| 8.4 | Eye Protection: | Safety glasses equipped with side shields should be adequate protection under most conditions of use. Wear goggles and/or face shield if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125 °F (51 °C). Have suitable eye wash water available. | | | | | | | | | |
| 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. Remove oil contaminated clothing. Launder oil contaminated clothing before reusing. Contaminated leather goods should be removed promptly and discarded. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA. | | | | | | | | | |

9. PHYSICAL & CHEMICAL PROPERTIES

| | | |
|------|---|----------------------------------|
| 9.1 | Appearance: | Blue opaque liquid |
| 9.2 | Odor: | Mild cumene odor |
| 9.3 | Odor Threshold: | NA |
| 9.4 | pH: | NA |
| 9.5 | Melting Point/Freezing Point: | NA |
| 9.6 | Initial Boiling Point/Boiling Range: | > 149 °C (> 300 °F) |
| 9.7 | Flashpoint: | > 93 °C (> 200 °F) |
| 9.8 | Upper/Lower Flammability Limits: | NA |
| 9.9 | Vapor Pressure: | < 5 @ 27 °C (80 °F) |
| 9.10 | Vapor Density: | NA |
| 9.11 | Relative Density: | 1.09 |
| 9.12 | Solubility: | Insoluble |
| 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: | VOC (less exempt): 12%; 146 g/L. |

10. STABILITY & REACTIVITY

| | | |
|------|-----------------------------------|---|
| 10.1 | Stability: | Stable under normal conditions; unstable with heat or contamination. |
| 10.2 | Hazardous Decomposition Products: | Oxides of carbon (CO, CO ₂). |
| 10.3 | Hazardous Polymerization: | Will not occur. |
| 10.4 | Conditions to Avoid: | Open flames, sparks, high heat, incompatible substances and direct sunlight. |
| 10.5 | Incompatible Substances: | Avoid extreme heat and ignition sources, strong acids and alkalis, reactive metals and strong oxidizing agents. |

11. TOXICOLOGICAL INFORMATION

| | | | | |
|------|-----------------------|---|-----------------|----------------|
| 11.1 | Routes of Entry: | Inhalation: YES | 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 in this document. <u>Silicon Dioxide</u> : LD ₅₀ (oral, rat): 3,160 mg/kg. | | |
| 11.3 | Acute Toxicity: | See Section 4.4 | | |
| 11.4 | Chronic Toxicity: | See Section 4.5 | | |
| 11.5 | Suspected Carcinogen: | <u>Silicon Dioxide</u> (as Silica) is listed as IARC Group 3 (Not classifiable as to its carcinogenicity to humans). Saccharin is listed as IARC Group 3 (Not classifiable as to its carcinogenicity to humans). | | |

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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 cause teratogenic effects in humans. |
| | Reproductive Toxicity: | This product is not reported to cause reproductive effects in humans. |
| 11.7 | Irritancy of Product: | The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure. |
| 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, 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 contains <u>Cumene Hydroperoxide</u> , 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 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 depletors. |
| 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/NDL. None of the components of this product are listed on the Priorities Substances List.  |
| 15.7 | State Regulatory Information: | <u>Saccharin</u> is found on the following state criteria list: FL, MA, MN, NJ, PA and WI. Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), Pennsylvania Right-to-Know List (PA), and Wisconsin Hazardous Substances List (WI). <u>Cumene Hydroperoxide</u> is found on the following state criteria list: FL, MA, NJ, PA, and WA. 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 listed in Annex I of EU Directive 67/548/EEC: <u>Cumene Hydroperoxide</u> : Irritant (Xi); Risk Phrases (R): 36/37 – Irritating to eyes and respiratory system. <u>Safety Phrases</u> (S): 1/2-3/7-14-36/37/39-45 – Keep locked up and out of reach of children. Keep container tightly closed in a cool place. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell seek medical advice immediately (show label where possible).  |


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16. OTHER INFORMATION

| | | | |
|------|----------------------|---|--|
| 16.1 | Other Information: | WARNING! CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Use only as directed. Do not breathe fumes. Avoid contact with skin. Keep container tightly closed in a cool place. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell seek medical advice immediately (show label where possible). KEEP LOCKED UP AND 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 & 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: | Harbor Freight Tools USA, Inc. 26541 Agoura Road Calabasas, CA 91302 USA Tel: +1 (805) 388-1000 http://www.harborfreight.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 | |

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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 |
| ES | Exposure Standard (Australia) |
| IDLH | Immediately Dangerous to Life and Health |
| OSHA | U.S. Occupational Safety and Health Administration |
| PEL | Permissible Exposure Limit |
| STEL | Short-Term Exposure Limit |
| TLV | Threshold Limit Value |
| TWA | Time Weighted Average |

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. |
|-----|--|

HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

| | | |
|---|-----------------|---------------------|
| 0 | Minimal Hazard | HEALTH |
| 1 | Slight Hazard | FLAMMABILITY |
| 2 | Moderate Hazard | PHYSICAL HAZARDS |
| 3 | Severe Hazard | PERSONAL PROTECTION |
| 4 | Extreme Hazard | |

PERSONAL PROTECTION RATINGS:

| | | | | | | | | | | | | | | | |
|--|-----------------------------------|----------------------------------|--|----------------|----------------|----------------------------------|--------|-------|-----------------|---------------------------------|-----------------|----------------------|-----------------------------------|----------------------|---------------------------|
| A | | G | | | | | | | | | | | | | |
| B | | H | | | | | | | | | | | | | |
| C | | I | | | | | | | | | | | | | |
| D | | J | | | | | | | | | | | | | |
| E | | K | | | | | | | | | | | | | |
| F | | X | Consult your supervisor or SOPs for special handling directions. | | | | | | | | | | | | |
| <table><tr><td> Safety Glasses</td><td> Splash Goggles</td><td> Face Shield & Protective Eyewear</td><td> Gloves</td></tr><tr><td> Boots</td><td> Synthetic Apron</td><td> Protective Clothing & Full Suit</td><td> Dust Respirator</td></tr><tr><td> Full Face Respirator</td><td> Dust & Vapor Half-Mask Respirator</td><td> Full Face Respirator</td><td> Airline Hood/Mask or SCBA</td></tr></table> | | | | 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 |
| 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 |
| mg/m3 | milligrams per cubic meter |
| NA | Not Available |
| ND | Not Determined |
| NE | Not Established |
| NF | Not Found |
| NR | No Results |
| ppm | parts per million |
| SCBA | Self-Contained Breathing Apparatus |

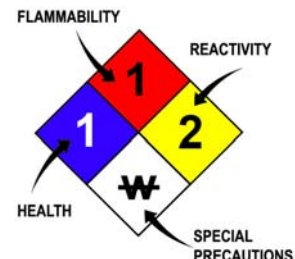
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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 ₅₀ or TC, TC ₅₀ , LC ₁₀ , & LC ₅₀ | 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 |
| NOHSC | National Occupational Health and Safety Commission (Australia) |
| 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) |
| HMIS-III | 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 |