

1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	MLP PEN
1.2	Chemical Name:	Mixture
1.3	Synonyms:	40128
1.4	Trade Names:	Birchwood Casey Solid Film Lubricant; MLP Pen
1.5	Product Uses & Restrictions:	Lubricant
1.6	Distributor's Name:	Birchwood Casey, LLC
1.7	Distributor's Address:	7887 Fuller Road, Suite #100, Eden Prairie, MN 55344 USA
1.8	Emergency Phone:	ChemTrec +1 (800) 424-9300 / +1 (703) 527-3887 or Poison Control Center +1 (866) 291-7152
1.9	Business Phone / Fax:	+1 (952) 388-6717

2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	<p>This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). DANGER! HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS. <u>Classification:</u> Flam. Liq. 2; Eye Irrit. 2; STOTSE 3 <u>Hazard Statements (H):</u> H225 – Highly flammable liquid and vapor. H319 – Causes serious eye irritation. H336 – May cause drowsiness or dizziness. <u>Precautionary Statements (P):</u> P210 – Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition. No smoking. P233 – Keep container tightly closed. P242 – Use non-sparking tools. P261 – Avoid breathing fume/vapor. P264 – Wash thoroughly after handling. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear protective clothing/ eye protection. P303 + P361 + P353 – IF ON SKIN – Take off immediately all contaminated clothing. Rinse skin with water or shower. P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 – Call a POISON CENTER/ doctor if you feel unwell. 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. P370 + P378 – In case of fire: Use Water, Foam, CO₂, Dry Chemical to extinguish. P403 + P235 – Store in a well ventilated place. Keep cool. P501 – Dispose of contents/container through licensed treatment, storage or disposal facility.</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	ppm	ppm	ppm	ppm	ppm	ppm	
	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH						
1,3-DIOXOLANE	646-06-0	NA	211-463-5	15-20	NA	NA	NF	NF	NF	NA	NA	NA		
	Flam. Liq. 2; H225													
METHOXYISOPROPYLACETATE	108-65-6	NA	203-603-9	15-20	NA	NA	50	274	NF	NA	NA	NA		
	Flam. Liq. 3; H226													
2-PROPOXYPROPANOL	1569-01-3	NA	216-372-4	15-20	NA	NA	NF	NF	NF	NA	NA	NA		
ACETONE	67-64-1	AL3150000	200-662-2	10-15	1800	NA	1185	2375	NF	2400	NA	2500		
	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3, H225, H319, H336													
MOLYBDENUM DISULFIDE	1317-33-5	QA4697000	215-263-9	10	NA	NA	NF	NF	NF	NA	NA	NA		
	Acute Tox. 4; H332													
BISPHENOL A POLYMER	25036-25-3	NA	NA	5-10	NA	NA	NF	NF	NF	NA	NA	NA		


4. FIRST AID MEASURES

4.1	First Aid:	<p><u>Ingestion:</u> DO NOT INDUCE VOMITING. Contact Poison Control Center +1 (866) 291-7152 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 discomfort persists and/or the skin reaction worsens, contact a physician immediately. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p><u>Inhalation:</u> Remove victim to fresh air at once. Under extreme conditions, if breathing stops, perform artificial respiration. Seek immediate medical attention.</p>
-----	------------	--

4. FIRST AID MEASURES – cont'd

4.2	Effects of Exposure:	<p><u>Ingestion:</u> If product is swallowed, may cause nausea, temporary gastrointestinal irritation. Vomiting and/or diarrhea.</p> <p><u>Eyes:</u> Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p><u>Skin:</u> May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.</p> <p><u>Inhalation:</u> None expected.</p>											
4.3	Symptoms of Overexposure:	<p><u>Ingestion:</u> Nausea, intestinal discomfort, vomiting and/or diarrhea.</p> <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. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.</p>											
4.4	Acute Health Effects:	Non-irritating when used as directed. 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:	None reported by the manufacturer.											
4.6	Target Organs:	Eyes, Skin											
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes).	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr style="background-color: #0000FF; color: white;"><td style="padding: 2px;">HEALTH</td><td style="padding: 2px;">2</td></tr> <tr style="background-color: #FF0000; color: white;"><td style="padding: 2px;">FLAMMABILITY</td><td style="padding: 2px;">3</td></tr> <tr style="background-color: #FFA500; color: white;"><td style="padding: 2px;">PHYSICAL HAZARDS</td><td style="padding: 2px;">0</td></tr> <tr style="background-color: #000000; color: white;"><td style="padding: 2px;">PROTECTIVE EQUIPMENT</td><td style="padding: 2px;">B</td></tr> <tr> <td style="padding: 2px;">EYES</td><td style="padding: 2px;">SKIN</td></tr> </table>	HEALTH	2	FLAMMABILITY	3	PHYSICAL HAZARDS	0	PROTECTIVE EQUIPMENT	B	EYES	SKIN
HEALTH	2												
FLAMMABILITY	3												
PHYSICAL HAZARDS	0												
PROTECTIVE EQUIPMENT	B												
EYES	SKIN												

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, CO _x).	
5.2	Extinguishing Methods:	Water, Foam, CO ₂ , Dry Chemical. Use water spray to cool unopened containers.	
5.3	Firefighting Procedures:	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) 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> ≥ 1 gallon, 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 municipal sewers and open bodies of water.</p>
-----	---------	---

7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid prolonged contact with this material. Avoid breathing the vapors generated by this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). Wash exposed skin thoroughly with plenty of soap & water after using this product. If necessary, use a moisturizer after washing. Do not eat, drink, or smoke while handling this product.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Keep away from incompatible materials listed in Section 10. Do not store in damaged or unmarked containers or storage devices. Keep containers securely closed when not in use. Open slowly on a level, stable surface. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. As a precaution against exposure to the eyes, nose, throat and face, this product should not be stored higher than waist level. Keep away from children at all times!
7.3	Special Precautions:	Do not store where temperatures can exceed 50 °C (122 °F). Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m ³)	CHEMICAL NAME(S)	ACGIH		NOHSC		OSHA			OTHER
			TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	
		METHOXYISOPROPYLACETATE	NA	NA	50	274	NF	NA	NA	NA
		ACETONE	1800	NA	1185	2375	NF	2400	NA	2500
8.2	Ventilation & Engineering Controls:	When working with large quantities of product, provide adequate ventilation (e.g., local exhaust ventilation, fans). Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.								
8.3	Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. If necessary, use only respiratory protection authorized per U.S. OSHA's requirement in 29 CFR §1910.134, or applicable U.S. state regulations, or the appropriate standards of Canada, its provinces, E.C. member states, or Australia.								
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. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants.								
8.5	Hand Protection:	If anticipated that prolonged & repeated skin contact will occur during use of this product, wear latex or rubber gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the E.C. member states.								
8.6	Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., ≥ 1 gallon), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.								



9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	liquid
9.2	Odor:	Strong solvent 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:	-20 ± 2 °C (-4 ± 2 °F) SETA Flash
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	1.186
9.12	Solubility:	NA
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: 5.0406 lb/g

10. STABILITY & REACTIVITY

10.1	Stability:	Relatively stable under ambient conditions when stored properly.
10.2	Hazardous Decomposition Products:	If exposed to <u>extremely high temperatures</u> , products of thermal decomposition may include irritating vapors and toxic gases (e.g., oxides of carbon & nitrogen).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks, flame.
10.5	Incompatible Substances:	Strong oxidizers, peroxides, strong acids or alkalis. Extreme heat and ignition sources.

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 not presented in this document.		
11.3	Acute Toxicity:	Moderate irritation to eyes and skin near affected areas.		
11.4	Chronic Toxicity:	This material may aggravate any pre-existing skin condition (e.g., dermatitis).		
11.5	Suspected Carcinogen:	No.		
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. TOXICOLOGICAL INFORMATION – cont'd

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 is 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:	This material should be kept out of sewage and drainage systems and all bodies of water. Releases of large volumes of this product are expected to be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Waste disposal must be in accordance with appropriate Federal, state, and local regulations.
13.2	Special Considerations:	U.S. EPA Waste Number: D001 (characteristic - ignitable)

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):	UN1263, PAINT RELATED MATERIAL, 3, II (LTD QTY - IP VOL ≤ 5.0 L); or CONSUMER COMMODITY, ORM-D – until 01/01/2021	
14.2	IATA (AIR):	ID8000, CONSUMER COMMODITY, 9 (IP VOL ≤ 0.5 L); or UN1263, PAINT RELATED MATERIAL, 3, II (LTD QTY - IP VOL ≤ 1.0 L)	
14.3	IMDG (OCN):	UN1263, PAINT RELATED MATERIAL, 3, II (LTD QTY - IP VOL ≤ 5.0 L)	
14.4	TDGR (Canadian GND):	UN1263, PAINT RELATED MATERIAL, 3, II (LTD QTY - IP VOL ≤ 1.0 L); or "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (IP VOL ≤ 1.0 L)	
14.5	ADR/RID (EU):	UN1263, PAINT RELATED MATERIAL, 3, II (LTD QTY - IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1263, PINTURA MATERIAL RELACIONADO, 3, II (CANTIDAD LIMITADA - IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN1263, PAINT RELATED MATERIAL, 3, II, LTD QTY (IP VOL ≤ 1.0 L)	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any chemicals subject to the 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):	<u>Acetone</u> : 2270 kg (5000 lbs)
15.5	Other Federal Requirements:	NA
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List. Class B2 Flammable Liquid.
15.7	State Regulatory Information:	<u>Acetone</u> is found on the following state criteria lists: California OSHA Hazardous Substances List (CA), Delaware Air Quality Management List (DE), Massachusetts Hazardous Substances List (MA), 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). No other 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. REGULATORY INFORMATION – cont'd

15.8	Other Requirements:	<p>The primary components of this product are listed in Annex I of EU Directive 67/548/EEC:</p> <p>1,3-Dioxolane: Flammable (F) <u>Risk Phrases (R):</u> 11 – Extremely flammable. <u>Safety Phrases (S):</u> 2-16 – Keep out of reach of children. Keep away from sources of ignition – No smoking.</p> <p>Methoxyisopropyl Acetate: Flammable (F) <u>Risk Phrases (R):</u> 10 – Flammable. <u>Safety Phrases (S):</u> 2 – Keep out of reach of children.</p> <p>Acetone: Highly Flammable (F+). <u>Risk Phrases (R):</u> 11-36-66-67 – Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. <u>Safety Phrases (S):</u> 9-16-23-33 - Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Do not breathe gas, fumes, vapor or spray. Take precautionary measures against static discharges.</p>	
------	---------------------	--	---

16. OTHER INFORMATION

16.1	Other Information:	<p>DANGER! HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SERIOUS EYE IRRITATION. MAY CAUSE DROWSINESS OR DIZZINESS. Use only as directed. Keep out of reach of children. Wear suitable protective clothing. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). If skin irritation occurs: get medical advice/attention. KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.</p>	
16.2	Terms & Definitions:	<p>See last page of this Safety Data Sheet.</p>	
16.3	Disclaimer:	<p>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 & Birchwood Casey'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.</p>	
16.4	Prepared for:	<p>Birchwood Casey, LLC 7887 Fuller Road, Suite #100 Eden Prairie, MN 55344 USA Tel: +1 (952) 388-6701 Fax: +1 (952) 388/6702 http://www.birchwoodCasey.com</p>	
16.5	Prepared by:	<p>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</p>	

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
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		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
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

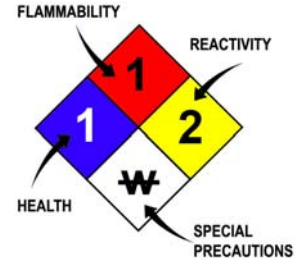
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₀₁	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₀₁, LD₀₁, & LD₀₁ or TC, TC₀₁, LC₀₁, & LC₀₁	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