

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

SDS Revision: 1.2

SDS Revision Date: 2/16/2017

## 1. PRODUCT &amp; COMPANY IDENTIFICATION

1.1	Product Name:	<b>OPI GELCOLOR PROHEALTH BASE COAT</b>
1.2	Chemical Name:	NA
1.3	Synonyms:	NA
1.4	Trade Names:	GC 020
1.5	Product Use:	Professional or Sundry Use Only
1.6	Distributor's Name:	OPI Products, Inc.
1.7	Distributor's Address:	13034 Saticoy Street, No. Hollywood, CA 91605 USA
1.8	Emergency Phone:	<b>CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 16377)</b>
1.9	Business Phone / Fax:	+1 (818) 759-2400 / +1 (818) 759-5776

## 2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a hazardous substance and as dangerous goods according to the classification criteria of NOHSC: 1088 (1999) and ADG Code (Australia). <b>WARNING! FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. CAUSES MILD SKIN IRRITATION.</b> Classification: Flam. Liq. 3; Eye Irrit. 2B; Skin Irrit. 3	
2.2	Label Elements:	<p><b>Hazard Statements (H):</b> H226 – Flammable liquid and vapor. H320 – Causes eye irritation. H316 – Causes mild skin irritation.</p> <p><b>Precautionary Statements (P):</b> P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 – Keep container tightly closed. P303+P361+P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P370+P378 – In case of fire: Use CO<sub>2</sub>, Halon (if permitted), Dry Chemical, Foam, as authorized. 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 irritations persist: Get medical advice. Attention. P332+P313 – If skin irritation occurs: Get medical advice attention. 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>	 
2.3	Other Warnings:	Keep out of reach of children.	

## 3. COMPOSITION &amp; INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m <sup>3</sup> )									OTHER
					ACGIH		NOHSC			OSHA				
					TLV	STEL	ppm	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
ETHYL ACETATE	141-78-6	AH5425000	201-550-6	30-60	400	400	200	400	NF	NF	NA	NA	2000	400 TWA
DI-HEMA TRIMETHYLHEXYL DICARBAMATE	72869-86-4	NA	276-957-5	10-20	NA	NA	NF	NF	NF	NA	NA	NA		
NITROCELLULOSE	9004-70-0	AH5425000	NA	3.0-15	400	400	400	200	NF	NA	NA	2000		
HYDROXYPROPYL METHACRYLATE	27813-02-1	UD3422500	248-666-3	1.0-10	NA	NA	NF	NF	NF	NA	NA	NA		
ACRYLATES COPOLYMER	25035-69-2	NA	NA	1.0-10	NA	NA	NF	NF	NF	NA	NA	NA		
TRIMETHYL PENTANYL DIISOBUTYRATE	6846-50-0	SA142000	229-937-9	1.0-5.0	NA	NA	NF	NF	NF	NA	NA	NA		
ETHYL TRIMETHYLBENZOYL PHENYL PHOSPHINATE	84434-11-7	NA	282-810-6	1.0-5.0	NA	NA	NF	NF	NF	NA	NA	NA		
HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	OZ4725000	212-782-2	1.0-5.0	NA	NA	NF	NF	NF	NA	NA	NA		
ISOBORNYL METHACRYLATE	7534-94-3	NA	231-403-1	1.0-5.0	NA	NA	NF	NF	NF	NA	NA	NA		
CAMPHOR	76-22-2	EX1225000	200-945-0	1.0-5.0	2	NA	12	19	NF	4	NA	200		
ACRYLIC ACID	79-10-7	NA	201-177-9	0.1-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
BHT (BUTYLATED HYDROXYTOLUENE)	128-37-0	GO78775000	204-881-4	0.1-1.0	2	NA	10	NF	NF	10	NA	NA		
HYDROXYCYCLOHEXYL PHENYL KETONE	947-19-3	NA	213-426-9	0.1-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 60725 (VIOLET 2)	81-48-1	CB7700000	201-353-5	0.1-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
BIS-TRIMETHYLBENZOYL PHENYLPHOSPHINE OXIDE	162881-26-7	NA	NA	0-0.1	NA	NA	NF	NF	NF	NA	NA	NA		

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#### 4. FIRST AID MEASURES

4.1	First Aid:	<p><b>Ingestion:</b> If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.</p> <p><b>Eyes:</b> Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. If irritation occurs, contact a physician.</p> <p><b>Skin:</b> If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.</p> <p><b>Inhalation:</b> Remove victim to fresh air.</p> <p><b>Special Removal Instructions:</b> Follow GelColor nail prep &amp; removal instructions. Longer wear may increase removal time - soak nails longer. Do not force or pull gel away from nail or use metal implements/electric drill to remove product. If client experiences any sensation during removal (e.g. pressure, squeezing, pinching), remove wrap and gently file surface of gel only along side walls with EDGE 240 File. Gently push off as much GelColor as possible with the Reusable Cuticle Stick. Resaturate foil wrap, rewrap nail, and continue soaking.</p>										
4.2	Effects of Exposure:	<p><b>Ingestion:</b> If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression.</p> <p><b>Eyes:</b> Irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.</p> <p><b>Skin:</b> May be irritating to skin in some sensitive individuals, especially after prolonged and/or repeated contact.</p> <p><b>Inhalation:</b> 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 individuals may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering.										
4.4	Acute Health Effects:	Mild to 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 known.										
4.6	Target Organs:	Eyes, skin and respiratory system.										
4.7	Medical Conditions Aggravated by Exposure:	Pre-existing skin, eye and respiratory disorders.										
		<table border="1"> <tr> <td><b>HEALTH</b></td> <td><b>1</b></td> </tr> <tr> <td><b>FLAMMABILITY</b></td> <td><b>2</b></td> </tr> <tr> <td><b>PHYSICAL HAZARDS</b></td> <td><b>1</b></td> </tr> <tr> <td><b>PROTECTIVE EQUIPMENT</b></td> <td><b>A</b></td> </tr> <tr> <td><b>EYES</b></td> <td><b>SKIN</b></td> </tr> </table>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>2</b>	<b>PHYSICAL HAZARDS</b>	<b>1</b>	<b>PROTECTIVE EQUIPMENT</b>	<b>A</b>	<b>EYES</b>	<b>SKIN</b>
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<b>PROTECTIVE EQUIPMENT</b>	<b>A</b>											
<b>EYES</b>	<b>SKIN</b>											

#### 5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	This product is not a flammable liquid. When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO <sub>2</sub> , NO <sub>x</sub> ). Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.	
5.2	Extinguishing Methods:	Water, Foam, CO <sub>2</sub> , Dry Chemical	
5.3	Firefighting Procedures:	As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, rinse contaminated equipment with soapy water before returning to service.	

#### 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). Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p>
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## 7. HANDLING &amp; STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid eye contact.
7.2	Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans). Do not store in damaged or unmarked containers or storage devices. Keep containers securely closed when not in use.
7.3	Special Precautions:	Spilled material may present a slipping hazard if left unattended. Clean all spills promptly.

## 8. EXPOSURE CONTROLS &amp; PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m <sup>3</sup> )	CHEMICAL NAME(S)	ACGIH		NOHSC			OSHA			OTHER
			TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
		ETHYL ACETATE	400	400	200	400	NF	NA	NA	2000	400 TWA
		NITROCELLULOSE	400	400	400	200	NF	NA	NA	2000	
		CAMPHOR	2	NA	12	19	NF	4	NA	200	
		BHT (BUTYLATED HYDROXYTOLUENE)	2	NA	10	NF	NF	10	NA	NA	
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. 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.									
8.4	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:	<b>AVOID SKIN CONTACT DUE TO SENSITIZING POTENTIAL.</b> 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:	<b>AVOID SKIN CONTACT DUE TO SENSITIZING POTENTIAL.</b> However, no special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the E.C. member states, or U.S. OSHA.									

## 9. PHYSICAL &amp; CHEMICAL PROPERTIES

9.1	Appearance:	Clear light pink liquid
9.2	Odor:	Slight
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:	NA
9.8	Upper/Lower Flammability Limits:	NA
9.9	Vapor Pressure:	NA
9.10	Vapor Density:	NA
9.11	Relative Density:	NA
9.12	Solubility:	Slightly Soluble
9.13	Partition Coefficient (log P <sub>ow</sub> ):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

## 10. STABILITY &amp; REACTIVITY

10.1	Stability:	Stable under ambient conditions when stored properly (see Section 7, Storage and Handling).
10.2	Hazardous Decomposition Products:	If exposed to extremely high temperatures, the products of thermal decomposition may include irritating vapors and carbon oxide gases (e.g., CO, CO <sub>2</sub> ).
10.3	Hazardous Polymerization:	May occur, if exposed to extremely high temperatures.
10.4	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks, flame.
10.5	Incompatible Substances:	This product is incompatible with strong oxidizers (e.g., peroxides, superoxides), strong acids (e.g., hydrochloric or muriatic acids), or strong bases (e.g., lye, potassium hydroxide).

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**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: <u>Ethyl Acetate</u> : LD <sub>50</sub> (oral, rat) = 5,620 mg/kg; LD <sub>50</sub> (oral, mouse) = 4,100 mg/kg; LC <sub>50</sub> (inh-6h, rat) = 16,000 ppm		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	This product contains <u>Ethyl Acetate</u> and <u>BHT (Butylated HydroxyToluene)</u> which are not carcinogenic to humans, but are listed as Group 3 carcinogens by the IARC.		
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 4.2		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

**12. ECOLOGICAL INFORMATION**

12.1	Environmental Stability:	The components of this product will slowly degrade over time into a variety of organic compounds. Specific environmental data available for the components of this product are as follows: <u>Ethyl Acetate</u> : K <sub>oc</sub> = 0.73. Water solubility: 64,000 mg/l. Bioconcentration Factor = 4-14. Bioconcentration is not anticipated to be significant. This compound can be removed from contaminated environments from volatilization, and biodegradation. This compound's half-life in water is 6.1 hours.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product.

**13. DISPOSAL CONSIDERATIONS**

13.1	Waste Disposal:	Dispose of in accordance with Federal, state and local regulations.
13.2	Special Considerations:	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):	UN1263, PAINT, 3, II, (LTD QTY, IP ≤ 1.0 L) or CONSUMER COMMODITY, ORM-D – until 01/01/2021	
14.2	IATA (AIR):	ID8000, CONSUMER COMMODITY, 9 (IP VOL ≤ 0.5 L) UN1263, PAINT, 3, II (LTD QTY, IP ≤ 1.0 L)	
14.3	IMDG (OCN):	UN1263, PAINT, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	UN1263, PAINT, 3, II, (LTD QTY, IP VOL ≤ 1.0 L); or "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (≤ 1.0 L)	
14.5	ADR/RID (EU):	UN1263, PAINT, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1263, PINTURA, 3, II, (CANTIDAD LIMITADA, IP VOL ≤ 1.0 L)	
14.7	ADGR (AUS):	UN1263, PAINT, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.8	Other:	This product may also be shipped as an Excepted Quantity (IP VOL ≤ 30 ml, PKG ≤ 500 ml)	

**15. REGULATORY INFORMATION**

15.1	SARA Reporting Requirements:	This product contains <u>Ethyl Acetate</u> , a substance that is subject to SARA Title III, Section 304 reporting.
15.2	SARA TPQ:	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:	<u>Ethyl Acetate</u> : 2,270 kg (5,000 lbs);
15.5	Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR subchapter G (Cosmetics).
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the Safety Data Sheet 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 B2, D2B (Flammable Liquid, Other Toxic Effects)



## 15. REGULATORY INFORMATION

15.7	State Regulatory Information:	<p><u>Ethyl Acetate</u> is found on the following state criteria lists: CA, DE, MA, MN, NJ, NY, PA, and WA.</p> <p><u>Nitrocellulose</u> is found on the following state criteria lists: FL, MA, and PA.</p> <p><u>Hydroxyethyl methacrylate (HEMA)</u> is found on the following state criteria list: NJ and PA</p> <p>None of the 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).</p>
15.8	Other Requirements:	NA

## 16. OTHER INFORMATION

16.1	Other Information:	<p><b>WARNING! FLAMMABLE LIQUID AND VAPOR. CAUSES EYE IRRITATION. CAUSES MILD SKIN IRRITATION.</b> Use only as directed. Discontinue use if irritation develops. Wash thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. In case of fire: Use CO<sub>2</sub>, Halon (if permitted), Dry Chemical, Foam, as authorized. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritations persist: Get medical advice. Attention. If skin irritation occurs: Get medical advice attention. Store in a well-ventilated place. Keep cool. <b>KEEP OUT OF REACH OF CHILDREN.</b></p>	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & OPI's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.	
16.4	Prepared for:	<p><b>OPI Products, Inc.</b>          13034 Saticoy Street          No. Hollywood, CA 91605 USA          Tel: +1 (818) 759-2400          Fax: +1 (818) 759-5776  <a href="http://www.opi.com">http://www.opi.com</a></p>	
16.5	Prepared by:	<p><b>ShipMate, Inc.</b>          P.O. Box 787          Sisters, Oregon 97759-0787 USA          Tel: +1 (310) 370-3600          Fax: +1 (310) 370-5700  <a href="http://www.shipmate.com">http://www.shipmate.com</a></p>	

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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
RTECS No.	Registry of Toxic Effects of Chemical Substances Number
EINECS No.	European Inventory of Existing Commercial Chemical Substances Number

## EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
IDLH	Immediately Dangerous to Life and Health
NOHSC	National Occupational Health and Safety Commission (Australia)
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.
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## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

## HEALTH, FLAMMABILITY &amp; REACTIVITY RATINGS:

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

<b>HEALTH</b>
<b>FLAMMABILITY</b>
<b>PHYSICAL HAZARDS</b>
<b>PERSONAL PROTECTION</b>

## 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	Protective 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:

Carc	Carcinogenic
Irrit	Irritant
NA	Not Available
NR	No Results
ND	Not Determined
NE	Not Established
NF	Not Found
SCBA	Self-Contained Breathing Apparatus
Sens	Sensitization
STOT RE	Specific Target Organ Toxicity – Repeat Exposure
STOT SE	Specific Target Organ Toxicity – Single Exposure

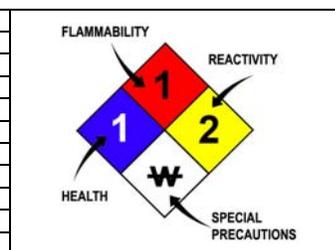
## NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

## 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 <sub>50</sub>	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC <sub>50</sub>	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD <sub>10</sub>	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD <sub>10</sub> , LD <sub>10</sub> , & LD <sub>01</sub> or TC, TC <sub>01</sub> , LC <sub>10</sub> , & LC <sub>01</sub>	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 <sub>m</sub>	Median threshold limit
log K <sub>OW</sub> or log K <sub>OC</sub>	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

## 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