

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


SDS Revision: 5.2

SDS Revision Date: 2/8/2016

1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	AXXIUM SOAK-OFF GEL LACQUER SYSTEM (ALL SHADES)
1.2	Chemical Name:	Methacrylate Mixture
1.3	Synonyms:	NA
1.4	Trade Names:	AX4 ** (Various Colors)
1.5	Product Use:	Professional Use Only
1.6	Distributor's Name:	OPI Products, Inc.
1.7	Distributor's Address:	13034 Satcoy Street, No. Hollywood, CA 91605 USA
1.8	Emergency Phone:	CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN 16377)
1.9	Business Phone / Fax:	+1 (818) 759-2400 / +1 (818) 759-5776

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! MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION.</p> <p><u>Classification:</u> Skin Sens. 1A; Eye Irrit. 2B; STOT SE 3</p> <p><u>Hazard Statements</u> (H): H317 – May causes allergic skin reaction. H320 – Causes eye irritation. H335 – May cause respiratory irritation.</p> <p><u>Precautionary Statements</u> (P): 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/eye protection/face protection. P302+P352 – IF ON SKIN: Wash with soap and water. P303+P361+P353 – 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. P321 – For specific first aid treatment (See Section 4 of this Safety Data Sheet.) 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>	
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3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)									OTHER	
					ACGIH		NOHSC			OSHA					
					TLV	STEL	ppm	ppm	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL		IDLH
POLYURETHANE ACRYLATE COPOLYMER (ACRYLATES/CARBAMATE COPOLYMER)	NA	NA	NA	10-30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
POLYURETHANE METHACRYLATE COPOLYMER (ACRYLATES/CARBAMATE COPOLYMER)	NA	NA	NA	10-30	NA	NA	NF	NF	NF	NA	NA	NA			
HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	OZ4725000	212-782-2	10-30	NA	NA	NF	NF	NF	NA	NA	NA			
	Skin Irrit. 2, Skin Sens. 1, Eye Irrit.2; H315, H317, H319														
ISOBORNYL ACRYLATE	5888-33-5	UD3940000	227-561-6	10-30	NA	NA	NF	NF	NF	NA	NA	NA			
	Skin Irrit.2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H315, H319, H335, H411														
MICA	12001-26-2	VV8760000	310-127-6	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA			
	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; STOT SE 1; H315, H319, H335														
CI 77891 (TITANIUM DIOXIDE)	13463-67-7	XR2275000	236-675-5	0.0-1.0	(10)	NA	NF	NF	NF	(10)	NA	NA			
CI 75470 (CARMINE)	1390-65-4	NA	215-724-4	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA			
TIN OXIDE	18282-10-5	XQ400000	242-159-0	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA			
SILICA	7631-86-9	VV7310000	231-545-4	0.0-1.0	(6)	NA	NF	NF	NF	(6)	NA	NA	DUST		
	Eye Irrit. 2A; STOT SE 3; H319, H335														
CI 15850 (RED 6)	5858-81-1	NA	227-497-9	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA			
CI 15850 (RED 7)	5281-04-9	NA	226-109-5	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA			

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3. COMPOSITION & INGREDIENT INFORMATION – cont'd

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		
CI 77491 (RED IRON OXIDES)	1309-37-1	NO740000	215-168-2	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77492 (YELLOW IRON OXIDES)	1345-27-3	NA	215-570-8	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77499 (BLACK IRON OXIDES)	1317-61-9	NA	215-277-5	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 73360 (RED 30)	2379-74-0	NA	219-163-6	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 45380 (RED 21)	15086-94-9	NA	239-138-3	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 45380 (RED 22)	17372-87-1	NA	241-409-6	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 45410 (RED 27)	18472-87-2	NA	242-355-6	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 45410 (RED 48)	13473-26-2	NA	236-747-6	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
ALUMINA	1344-28-1	BD1200000	215-691-9	0.0-1.0	10	NA	NF	NF	NF	15	NA	NA	DUST	
CI 77120 (BARIUM SULFATE)	7727-43-7	CR0600000	231-784-4	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77007 (ULTRAMARINES)	1302-83-6	NA	215-111-1	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 19140 (YELLOW 5)	1934-21-0	UQ6400000	217-699-5	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77163 (BISMUTH OXYCHLORIDE)	7787-59-9	EB2700000	232-122-7	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77742 (MANGANESE VIOLET)	10101-66-3	NA	233-257-4	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77510 (FERRIC FERROCYANIDE)	14038-43-8	NA	237-875-5	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 42090 (BLUE 1)	3844-45-9	BQ4725000	223-339-8	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 60725 (VIOLET 2)	81-48-1	CB7700000	201-353-5	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 17200 (RED 33)	3567-66-6	NA	222-656-9	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 77000 (ALUMINUM POWDER)	7429-90-5	BD0330000	231-072-3	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		
CI 15880 (RED 34)	6417-83-0	NA	229-142-3	0.0-1.0	NA	NA	NF	NF	NF	NA	NA	NA		


4. FIRST AID MEASURES

4.1	First Aid:	<p>Ingestion: 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>Eyes: 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>Skin: 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>Inhalation: Remove victim to fresh air.</p>
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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, headache, vomiting and/or diarrhea and central nervous system depression.</p> <p><u>Eyes:</u> Irritating 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 and/or repeated contact.</p> <p><u>Inhalation:</u> Inhalation of vapors is unlikely under normal conditions of use and handling; however, inhalation of vapors in excess of 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 in eyes may cause redness, itching and watering.															
4.4	Acute Health Effects:	Mild to moderate irritation to eyes and skin near affected areas.															
4.5	Chronic Health Effects:	None known.															
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, skin, and respiratory system).															
		<table border="1"> <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:	Exothermic polymerization may cause containers to rupture. Cool containers with water to prevent polymerization. This product is a non-flammable liquid. When involved in a fire, this product may ignite and decompose to form toxic gases (e.g., CO, CO ₂ , NO _x).	
5.2	Extinguishing Methods:	CO ₂ , Halon (if permitted), Dry Chemical, Foam	
5.3	Firefighting Procedures:	This product is a combustible liquid. When involved in a fire, this product may ignite readily and decompose to produce carbon oxides. First responders should wear eye protection. Structural firefighters must wear SCBAs and full protective equipment. Use a water spray or fog to reduce or direct vapors. Water may not be effective in actually extinguishing a fire involving this product.	

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). 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 drains, municipal sewers and open bodies of water.</p>
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Avoid prolonged contact with the product. After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product.
7.2	Storage & Handling:	<p>Keep this material away from heat, sparks and open flame. 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.</p> <p>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). Material should be stored in secondary containers as appropriate.</p>
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	
		CI 77891 (TITANIUM DIOXIDE)	(10)	NA	NF	NF	NF	(10)	NA	NA	
		SILICA	(6)	NA	NF	NF	NF	(6)	NA	NA	DUST
		ALUMINA	10	NA	NF	NF	NF	15	NA	NA	DUST

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

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, EU member states, or Australia.								
8.4	Eye Protection:	Depending on the use of this product, splash or safety glasses may be worn. If necessary, refer to U.S. OSHA 29 CFR §1910.133, Canadian standards, or the European Standard EN166. 								
8.5	Hand Protection:	If anticipated that prolonged & repeated skin contact will occur during use of this product, wear neoprene or rubber gloves for routine industrial use. 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:	No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA.								

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Viscous gel
9.2	Odor:	Characteristic acrylate odor
9.3	Odor Threshold:	NA
9.4	pH:	ND
9.5	Melting Point/Freezing Point:	NE
9.6	Initial Boiling Point/Boiling Range:	NA
9.7	Flashpoint:	ND
9.8	Upper/Lower Flammability Limits:	ND
9.9	Vapor Pressure:	NNA
9.10	Vapor Density:	NA
9.11	Relative Density:	1.4900-1.5000
9.12	Solubility:	Immiscible
9.13	Partition Coefficient (log P _{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	10,000 – 30,000 cPs
9.17	Other Information:	ND

10. STABILITY & 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 ₂).
10.3	Hazardous Polymerization:	May occur, if exposed to extremely high temperatures.
10.4	Conditions to Avoid:	None known.
10.5	Incompatible Substances:	This product is incompatible with alkaline metals, strong oxidizers (e.g., peroxides, superoxides), strong acids (e.g., hydrochloric or muriatic acids), or strong bases (e.g., lye, potassium hydroxide).

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. There are toxicology data for the components of the product, which are found in scientific literature. This data has not been presented in this document.		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	NA		

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11. TOXICOLOGICAL INFORMATION – cont'd

11.6	Reproductive Toxicity:	This product is not reported to cause 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:	See Section 4.3
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:	Waste disposal must be in accordance with appropriate 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):	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:	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 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>Hydroxyethyl Methacrylate (HEMA)</u> is found on the following state criteria list: NJ and PA 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).
15.8	Other Requirements:	The primary components of this product are listed in Annex I of EU Directive 67/548/EEC: <u>Hydroxyethyl Methacrylate (HEMA)</u> : Irritant (Xi). <u>Risk Phrases</u> (R): 36/38-43 - Irritating to eyes, and skin. May cause sensitization by skin contact. <u>Safety Phrases</u> (S): 2-26-28: Keep away from children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. 

16. OTHER INFORMATION

16.1	Other Information:	WARNING! MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. Use only as directed. Irritating to eyes, skin and respiratory system. Keep container tightly closed in a cool place. Avoid contact with skin and eyes. Wear eye protection. Do not take internally. Keep away from heat and open flame. KEEP OUT OF REACH OF CHILDREN.	
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.	
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & 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:	OPI Products, Inc. 13034 Saticoy Street No. Hollywood, CA 91605 USA Tel: +1 (818) 759-2400 Fax: +1 (818) 759-5776 http://www.opi.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	

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
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EXPOSURE LIMITS IN AIR:

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

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 & REACTIVITY RATINGS:

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

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A	
B	
C	
D	
E	
F	

G	
H	
I	
J	
K	
X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Synthetic Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

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

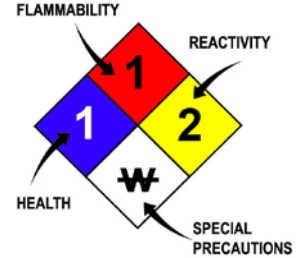
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀ or TC, TC₀, LC₁₀, & LC₀	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{OW} or log K_{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

EC (67/548/EEC) INFORMATION:

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