

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

1. PRODUCT IDENTIFICATION

1.1	Product Name: OPI START TO FINISH BASE COAT, TOP COAT & NAIL STRENGTHENER REGULAR FORMULA
1.2	Chemical Name: SOLVENT MIXTURE
1.3	Synonyms: NA
1.4	Trade Names: NTT70, NTT65
1.5	Product Use: COSMETIC USE ONLY
1.6	Manufacturer's Name: OPI PRODUCTS, INC.
1.7	Manufacturer's Address: 13034 SATICOY STREET, NO. HOLLYWOOD, CA 91605 USA
1.8	Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300
1.9	Business Phone: +1 (818) 759-2400 / +1 (800) 341-9999

2. HAZARD IDENTIFICATION

2.1	Hazard Identification: Flammable liquid. This product is classified as a hazardous substance and as dangerous goods according to the classification criteria of NOHSC and ADG Code (Australia).
2.2	Routes of Entry: Inhalation: YES Absorption: YES Ingestion: YES
2.3	Effects of Exposure: INGESTION: If product is swallowed, may cause nausea, vomiting and/or diarrhea and central nervous system depression. SKIN & EYES: Irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering. May be irritating to skin in some sensitive individuals, especially after prolonged and/or repeated contact. INHALATION: 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 2 (Composition and Ingredient Information) can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).
2.4	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.
2.5	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.
2.6	Chronic Health Effects: None known.
2.7	Target Organs: Eyes, skin and respiratory system.

NA = Not Available; ND = Not Determined; NE = Not Established; C = Ceiling Limit; See Section 1.6 for Additional Definitions of Terms Used

NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)					
					ACGIH - ppm		OSHA - ppm			OTHER
					TLV	STEL	PEL	STEL	IDLH	
BUTYL ACETATE	123-86-4	AF7350000	204-658-1	≤ 25.0	150	200	200	200	1700	150 TWA
ETHYL ACETATE	141-78-6	AH5425000	201-550-6	≤ 15.0	400	NE	400	NE	2000	400 TWA
ALCOHOL DENATURED	64-17-5	KQ6300000	200-578-6	≤ 15.0	1000	NA	1000	NA	NA	
NITROCELLULOSE	9004-70-0	QW0970000	NA	≤ 10.0	(10)	NE	(10)	NE	NE	
PROPYL ACETATE	109-60-4	AJ3675000	203-686-1	≤ 10.0	200	250	200	NA	NA	
HEPTANE	142-82-5	MI7700000	205-563-8	≤ 6.0	400	NA	500	NA	NA	
TOSYLAMIDE/EPOXY RESIN	130353-62-7	NA	NA	≤ 6.0	NE	NE	NE	NE	NE	
ISOPROPYL ALCOHOL	67-63-0	NT8050000	200-661-7	≤ 6.0	400	500	400	500	2000	400 TWA
DIBUTYL PHTHALATE	84-74-2	TI0875000	201-557-4	≤ 6.0	(5)	NE	(5)	NE	NE	
CAMPHOR	76-22-2	EX1225000	200-945-0	≤ 2.0	(2)	NE	(2)	NE	NE	
FORMALDEHYDE	50-00-0	LP8925000	200-001-8	≤ 2.0	(0.3)	NA	(0.75)	NA	NA	(0.016)
ETOCRYLENE	5232-99-5	AT6200000	213-822-1	≤ 1.0	NE	NE	NE	NE	NE	
POLYVINYL BUTYRAL	63148-65-2	TR4955000	NA	≤ 1.0	NE	NE	NE	NE	NE	
CI 60725 (D & C VIOLET #2)	81-48-1	CB7700000	201-353-5	≤ 1.0	NE	NE	NE	NE	NE	
OTHER COMPONENTS PRESENT IN LESS THAN 1% CONCENTRATION				BAL	THE REMAINING COMPONENTS DO NOT CONTRIBUTE ANY SIGNIFICANT ADDITIONAL HAZARDS					

4. FIRST AID MEASURES

4.1	First Aid:	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. 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. SKIN: If irritation occurs and product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the effected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately. INHALATION: Remove victim to fresh air at once.													
4.2	Medical Conditions Aggravated by Exposure:	<table><tr><td>HEALTH</td><td>1</td></tr><tr><td>FLAMMABILITY</td><td>3</td></tr><tr><td>REACTIVITY</td><td>0</td></tr><tr><td>PROTECTIVE EQUIPMENT</td><td>A</td></tr><tr><td>EYES</td><td></td></tr></table>				HEALTH	1	FLAMMABILITY	3	REACTIVITY	0	PROTECTIVE EQUIPMENT	A	EYES	
HEALTH	1														
FLAMMABILITY	3														
REACTIVITY	0														
PROTECTIVE EQUIPMENT	A														
EYES															
	None known.														

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: -4 °C (24 °F) estimated.				
5.2	Autoignition Temperature: NA				
5.3	Flammability Limits:	Lower Explosive Limit (LEL):	NE	Upper Explosive Limit (UEL):	NE
5.4	Fire & Explosion Hazards: WARNING: Flammable! Keep away from heat, lit cigarettes, sparks & open flame. Keep container closed.				
5.5	Extinguishing Methods: HazChem Code: 3YE Hazard Identification Number: 33 CO2, Halon, Dry Chemical, Foam				
5.6	Firefighting Procedures: This product is a Class IB flammable liquid. When involved in a fire, this product will ignite readily and decompose to produce carbon oxides. Vapors of this product are heavier than air and may travel to a source of ignition and flash back to a leaking or open container. 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: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. For small spills (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. For spills ≥ 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.
-----	---

7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices: Avoid prolonged contact with the product. Avoid breathing vapors of this product. Use in a well-ventilated location (e.g., local exhaust ventilation, fans). After use, wash hands and exposed skin with soap and water. Do not eat, drink or smoke while handling product.
7.2	Storage & Handling: 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. 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).
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.

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	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.
8.2	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.
8.3	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.
8.4	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.
8.5	Body Protection: 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 & CHEMICAL PROPERTIES

9.1	Density:	0.998 – 1.0008
9.2	Boiling Point:	NA
9.3	Melting Point:	NE
9.4	Evaporation Rate:	NA
9.5	Vapor Pressure:	NA
9.6	Molecular Weight:	NE
9.7	Appearance & Color:	Viscous liquid with ester-like (fruity) odor
9.8	Odor Threshold:	ND
9.9	Solubility:	Insoluble in water
9.10	pH	NA
9.11	Viscosity:	1000 cPs to 3000 cPs
9.12	Other Information:	NA

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, CO₂).
10.3	Hazardous Polymerization: May occur, if exposed to extremely high temperatures.
10.4	Conditions to Avoid: 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).
10.5	Incompatible Substances: None known.

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

11. TOXICOLOGICAL INFORMATION

11.1	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. These data have not been presented in this document.
11.2	Acute Toxicity: See Section 2.5
11.3	Chronic Toxicity: See Section 2.6
11.4	Suspected Carcinogen: This product contains Formaldehyde which is listed as an OSHA carcinogen, Group 1 carcinogen (IARC) and a Group 2 carcinogen (NTP). This product contains Formaldehyde, a substance known to the State of California to cause cancer (California Proposition 65). This product also contains Isopropyl Alcohol, which is not carcinogenic to humans, but is listed as a Group 3 carcinogen by the IARC.
11.5	Reproductive Toxicity: This product contains Dibutyl Phthalate, a substance known to the State of California to cause reproductive harm (California Proposition 65).
	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.
11.6	Irritancy of Product: See Section 2.3
11.7	Biological Exposure Indices: NE
11.8	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: Ethyl Acetate: $K_{oc} = 0.73$. 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. Butyl Acetate: $K_{oc} = 1.82$. Water solubility: 120 parts H₂O at 25°C (77°F). 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; however, very large releases of this product may 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)

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

14. TRANSPORTATION INFORMATION

The basic description (proper shipping name, hazard class & division, ID Number, 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): CONSUMER COMMODITY, ORM-D (≤ 1.0 L) UN1263, PAINT, 3, II (> 1.0 L)
14.2	IATA (AIR): CONSUMER COMMODITY, 9, ID8000 (≤ 0.5 L) UN1263, PAINT, 3, II (> 0.5 L)
14.3	IMDG (OCN): UN1263, PAINT, 3, II, LTD QTY (≤ 1.0 L) UN1263, PAINT, 3, II (> 1.0 L)
14.4	TDGR (Canadian GND): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" (≤ 1.0 L) UN1263, PAINT, 3, II (> 1.0 L)
14.5	ADR/RID (EU): UN1263, PAINT, 3, II, ADR, LTD QTY (≤ 1.0 L)
14.6	MEXICO (SCT): UN1263, PINTURA, 3, II, CANTIDAD LIMITADA (≤ 1.0 L)



15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: SARA 304 (40 CFR Table 302.4) – Butyl Acetate, Ethyl Acetate
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): Butyl Acetate: 5000 lbs.; Ethyl Acetate: 5000 lbs.; Dibutyl Phthalate: 10 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 MSDS 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. Class B2 Flammable Liquid.



15.7	State Regulatory Information: Ingredients in this mixture on found on the following state criteria lists:																								
	<table border="0"> <tr> <td>California OSHA Hazardous Substances List</td><td>Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>California Proposition 65 (Reproductive Harm)</td><td>Dibutyl Phthalate</td></tr> <tr> <td>California Proposition 65 (Cancer)</td><td>Formaldehyde</td></tr> <tr> <td>Delaware Air Quality Management List</td><td>Butyl Acetate, Ethyl Acetate, Nitrocellulose, Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>Massachusetts Hazardous Substances List</td><td>Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor</td></tr> <tr> <td>Michigan Critical Substances List</td><td>Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>Minnesota Hazardous Substances List</td><td>Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor</td></tr> <tr> <td>New Jersey Right to Know Hazardous Substances List</td><td>Isopropanol, Nitrocellulose, Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>New York List of Hazardous Substances</td><td>Butyl Acetate, Ethyl Acetate, Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>Pennsylvania Hazardous Substances List</td><td>Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor</td></tr> <tr> <td>Washington Permissible Exposure Limits for Air Contaminants</td><td>Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate</td></tr> <tr> <td>Wisconsin Hazardous Substances List</td><td>Ethyl Acetate, Formaldehyde</td></tr> </table>	California OSHA Hazardous Substances List	Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate	California Proposition 65 (Reproductive Harm)	Dibutyl Phthalate	California Proposition 65 (Cancer)	Formaldehyde	Delaware Air Quality Management List	Butyl Acetate, Ethyl Acetate, Nitrocellulose, Formaldehyde, Dibutyl Phthalate	Massachusetts Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor	Michigan Critical Substances List	Formaldehyde, Dibutyl Phthalate	Minnesota Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor	New Jersey Right to Know Hazardous Substances List	Isopropanol, Nitrocellulose, Formaldehyde, Dibutyl Phthalate	New York List of Hazardous Substances	Butyl Acetate, Ethyl Acetate, Formaldehyde, Dibutyl Phthalate	Pennsylvania Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor	Washington Permissible Exposure Limits for Air Contaminants	Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate	Wisconsin Hazardous Substances List	Ethyl Acetate, Formaldehyde
California OSHA Hazardous Substances List	Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate																								
California Proposition 65 (Reproductive Harm)	Dibutyl Phthalate																								
California Proposition 65 (Cancer)	Formaldehyde																								
Delaware Air Quality Management List	Butyl Acetate, Ethyl Acetate, Nitrocellulose, Formaldehyde, Dibutyl Phthalate																								
Massachusetts Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor																								
Michigan Critical Substances List	Formaldehyde, Dibutyl Phthalate																								
Minnesota Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor																								
New Jersey Right to Know Hazardous Substances List	Isopropanol, Nitrocellulose, Formaldehyde, Dibutyl Phthalate																								
New York List of Hazardous Substances	Butyl Acetate, Ethyl Acetate, Formaldehyde, Dibutyl Phthalate																								
Pennsylvania Hazardous Substances List	Ethanol, Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate, Camphor																								
Washington Permissible Exposure Limits for Air Contaminants	Butyl Acetate, Ethyl Acetate, Isopropanol, Formaldehyde, Dibutyl Phthalate																								
Wisconsin Hazardous Substances List	Ethyl Acetate, Formaldehyde																								

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

15. REGULATORY INFORMATION - continued

15.8 67/548/EEC (European Union) Requirements:

The primary component of this product is not listed in Annex I of EU Directive 67/548/EEC:**Ethyl Acetate:** Flammable (F). R: 11-36/37/38 – Highly flammable. Irritating to eyes, respiratory system and skin. S: 2-16-23-29-33 – Keep out of the reach of children. Keep away from sources of ignition - No smoking. Do not breathe gas, fumes, vapor or spray. Do not empty into drains. Take precautionary measures against static discharges.**Butyl Acetate:** Flammable (F). R: Flammable. S: 9-16-33 - Keep container in a well-ventilated place. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

16. OTHER INFORMATION

16.1 Other Information:

EXTREMELY FLAMMABLE! Keep away from heat or flame. Use only as directed. Avoid eye contact. If contact occurs, flush eye thoroughly with running water. Use only in a well-ventilated area. If redness or other signs of adverse reaction occur, discontinue use immediately. Keep container closed. Store in a cool place. **KEEP OUT OF REACH OF CHILDREN.**

16.2 Terms & Definitions:

See last page of this MSDS.

16.3 Disclaimer:

This Material 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 Products' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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
+1 (818) 759-2400 phone
+1 (818) 759-5770 fax
<http://www.opi.com/>

O·P·I

16.5 Prepared by:
ShipMate, Inc.
18436 Hawthorne Boulevard, Suite 201
Torrance, CA 90504
+1 (310) 360-3700 phone
+1 (310) 360-5700 fax
<http://www.shipmate.com/>

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

MSDS Revision: 2.0

MSDS Revision Date: 02/01/2007

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. 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
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.
-----	--

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

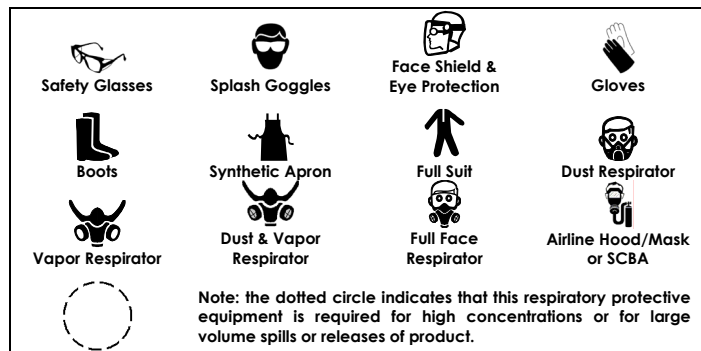
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

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



PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or S.O.P. for special handling directions.



OTHER STANDARD ABBREVIATIONS:

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

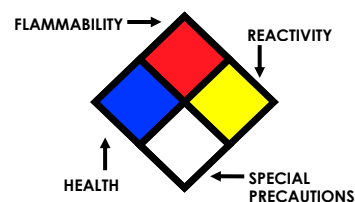
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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



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 ₁₀ , 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
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)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful