

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

MSDS Revision: 2.2

MSDS Revision Date: 10/22/2009

1. PRODUCT IDENTIFICATION

1.1	Product Name: BONDEX
1.2	Chemical Name: ETHYL ACETATE SOLUTION
1.3	Synonyms: NA
1.4	Trade Names: NA
1.5	Product Use: PROFESSIONAL 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: This product is neither classified as a HAZARDOUS SUBSTANCE nor as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088(2004) and ADG Code (Australia). Flammable Liquid.						
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. EYES: Mildly to moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering. SKIN: 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 & Ingredient Information) can cause central nervous system depression (e.g., drowsiness, dizziness, headaches, nausea).						
2.4	Symptoms of Overexposure: EYES: Overexposure in eyes may cause redness, itching and watering. SKIN: Symptoms of skin overexposure in some sensitive individuals may include redness, itching, and irritation of affected areas.						
2.5	Acute Health Effects: Mild to moderate irritation to eyes and skin near affected areas. High concentrations of vapors may cause drowsiness, dizziness, headaches and nausea.						
2.6	Chronic Health Effects: None known.						
2.7	Target Organs: Eyes, skin & respiratory system.						

NA = Not Available; ND = Not Determined; NE = Not Established; C = Ceiling Limit; See Section 16 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.

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3. COMPOSITION & INGREDIENTS

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)								
					ACGIH		NOHSC			OSHA			OTHER
					ppm		ppm			ppm			
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
ETHYL ACETATE	141-78-6	AH5425000	205-500-4	≤ 88.0	1400	NA	720	1440	NF	1400	NA	NA	
HEMA MALEATE	51978-15-5	NA	257-569-5	≤ 9.0	NE	NE	NF	NF	NF	NE	NE	NE	
HEMA	868-77-9	OZ4725000	212-782-2	≤ 3.0	10	NA	NF	NF	NF	NA	NA	NA	

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: If product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes. Open and close eyelid(s) to ensure thorough irrigation. If problem persists, seek immediate medical attention. SKIN: If irritation occurs & product is on the skin, rinse thoroughly with lukewarm water, followed by a thorough washing of the affected area with plenty of soap and water. Do not wear contaminated clothing until after it has been properly cleaned. If irritation, redness or swelling persists, consult a physician immediately. INHALATION: Remove victim to fresh air at once. If breathing stops, perform artificial respiration at once. Seek immediate medical attention.
4.2	Medical Conditions Aggravated by Exposure: Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, respiratory system).

HEALTH	1
FLAMMABILITY	3
REACTIVITY	1
PROTECTIVE EQUIPMENT	B
EYES	SKIN

5. FIREFIGHTING MEASURES

5.1	Flashpoint & Method: -3 °C (26 °F), TCC
5.2	Aut ignition Temperature: ND
5.3	Flammability Limits: Lower Explosive Limit (LEL): 2.2% Upper Explosive Limit (UEL): 11.4%
5.4	Fire & Explosion Hazards: WARNING: Flammable! Keep away from heat, lit cigarettes, sparks and open flames. Keep container closed when not in use. When heated above the flashpoint, emits flammable vapors which, when mixed with air, can burn or explode. Mist or sprays may be flammable at temperatures below flashpoint.
5.5	Extinguishing Methods: CO₂, Dry Chemical or Foam, as authorized.
5.6	Firefighting Procedures: When involved in a fire, this product will 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. HAZCHEM CODE: 3YE

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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 (3.785 liters)) 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 \geq 1 gallon (3.785 liters), 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 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:
- NA**

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

- 8.1 Ventilation & Engineering Controls:
- Use with adequate ventilation (e.g., open doors and windows, local exhaust ventilation). Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).**
- 8.2 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.**
- 8.3 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.**
- 8.4 Hand Protection:
- None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., \geq 1 gallon), wear rubber or impervious plastic gloves.**
- 8.5 Body Protection:
- No apron required when handling small quantities.**
- When handling large quantities (e.g., \geq 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.**

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9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	0.902
9.2	Boiling Point:	77.7 °C (172 °F)
9.3	Melting Point:	NA
9.4	Evaporation Rate:	NA
9.5	Vapor Pressure:	NA
9.6	Molecular Weight:	NA
9.7	Appearance & Color:	Clear liquid with fragrant fruity odor.
9.8	Odor Threshold:	NA
9.9	Solubility:	Slightly miscible with water.
9.10	pH	NA
9.11	Viscosity:	Non-viscous.
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, CO ₂).
10.3	Hazardous Polymerization:	May occur if exposed to extremely high temperatures.
10.4	Conditions to Avoid:	None reported.
10.5	Incompatible Substances:	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	Toxicity Data:	This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the 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:	No
11.5	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.
11.6	Irritancy of Product:	See section 2.3
11.7	Biological Exposure Indices:	NE
11.8	Physician Recommendations:	Treat symptomatically.

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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.
12.2	Effects on Plants & Animals: There is no specific data available for this product.
12.3	Effects on Aquatic Life: There is no specific data available for this product. Releases of large volumes may be harmful or fatal to overexposed aquatic life. Aquatic toxicity data for components of this product are available, but are not presented in this MSDS.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: Dispose of in accordance with all Federal, state, and local regulations.
13.2	Special Considerations: U.S. EPA Characteristic Waste: D001 (Flammable)

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 ($x \leq 1.0$ L) UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 1.0$ L)
14.2	IATA (AIR): ID8000, CONSUMER COMMODITY, 9 UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 0.5$ L)
14.3	IMDG (OCN): UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II, LTD QTY UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 1.0$ L)
14.4	TDGR (Canadian GND): MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE" UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 1.0$ L)
14.5	ADR/RID (EU): UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II, LTD QTY UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 1.0$ L)
14.6	MEXICO (SCT): UN1993, LIQUIDOS INFLAMABLES, N.E.P. (ETIL ACETATO, METACRIOLOXYETIL MALEATO), 3, II, CANTIDAD LIMITADA UN1993, LIQUIDOS INFLAMABLES, N.E.P. (ETIL ACETATO, METACRIOLOXYETIL MALEATO), 3, II ($x > 1.0$ L)
14.7	ADGR (AUS): UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II, LTD QTY UN1993, FLAMMABLE LIQUID N.O.S. (ETHYL ACETATE, METHACRYOYLOXYETHYL MALEATE), 3, II ($x > 1.0$ L)



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15. REGULATORY INFORMATION

15.1 SARA Reporting Requirements:

NA

15.2 SARA Threshold Planning Quantity:

NA

15.3 TSCA Inventory Status:

All components of this product are listed in the TSCA Inventory or are exempt.

15.4 CERCLA Reportable Quantity (RQ):

Ethyl Acetate: 2268 kg; 5000 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/NDSL. 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 are found on the following state criteria lists:

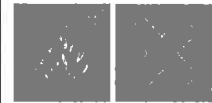
California OSHA Hazardous Substances List
 Massachusetts Hazardous Substances List
 Minnesota hazardous Substances List
 New Jersey Right to Know List
 Pennsylvania Hazardous Substances List
 California Prop 65: No significant risk level. None of the chemicals in this product are listed.

Ethyl Acetate
 Ethyl Acetate
 Ethyl Acetate
 Ethyl Acetate
 Ethyl Acetate

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

The primary component of this product is listed in Annex I of EU Directive 67/548/EEC:**Ethyl Acetate: Highly Flammable (F+), Irritant (Xi). R: 11-36-66-67 – Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking.**

Vapors may cause drowsiness and dizziness. S: 2-16-24/25/26-33 – Keep out of the reach of children. Keep container tightly closed. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

HAZCHEM CODE: 3YE

16. OTHER INFORMATION

16.1 Other Information:

Precisely follow directions and MSDS (available through your supplier) for use. **Avoid all skin contact.** If redness or other signs of adverse reaction occur, discontinue use immediately. Use only in a well ventilated area. A ventilation system that expels vapors to the outdoors is recommended. Poisonous if swallowed! **Keep out of reach of children. FLAMMABLE!** Keep away from heat or flame. In case of emergency, contact your physician or local Poison Control Center immediately. **FOR PROFESSIONAL USE ONLY.**

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:

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16.5 Prepared by:

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 **ShipMate**
 Dangerous Goods
 Training & Consulting

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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
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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



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.

Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves
Boots	Synthetic Apron	Full Suit	Dust Respirator
Vapor Respirator	Dust & Vapor Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

Note: the dotted circle indicates that this respiratory protective equipment is required for high concentrations or for large volume spills or releases of product.

OTHER STANDARD ABBREVIATIONS:

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

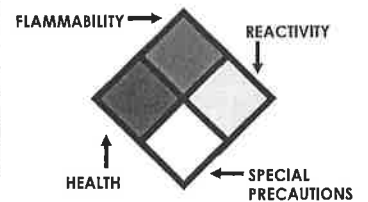
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

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 ₀₁	Lowest dose to cause a symptom
TCLO	Lowest concentration to cause a symptom
TD ₀₁ , LD ₀₁ , & LD ₀₁ or TC, TC ₀₁ , LC ₀₁ , & LC ₀₁	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