

MATERIAL SAFETY DATA SHEET
Epoxy.com VINYL ESTER BINDER RESIN PART A

PRODUCT NAME: Epoxy.com VINYL ESTER BINDER PART A
PRODUCT CODE: Product #85 Part A

HMIS CODES: H F R P
2 3 2 C

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: EPOXY SYSTEMS, INC.
ADDRESS: 20774 West Pennsylvania Ave
Dunnellon, FL 34431
EMERGENCY NUMBER: 1-800-633-8253
INFORMATION NUMBER: 1-352-489-1666
DATE PRINTED: 12/2008
NAME OF PREPARER: N. LAMBERT

SECTION 2: HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Vinyl Ester Resin	068002-44-8	NE	NE	90-100	YES (IARC)
Styrene*					
Acrylate Copolymer	26376-86-3	NE	NE	0-10	NO
Cobalt Maphthenate **	61789-51-3		0.1 mg/m3	0-10	NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

NE - Not Established

*Present at level of 44 wgt% (regulated)

**Present at level of 30 PPM in product (Regulated OSHA Z-1)

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE	: 313° F (styrene)
VAPOR DENSITY	: 3.6 (styrene)
VAPOR PRESSURE	: 7 mm Hg @ 75° F (styrene)
VOC	: 3.81 lbs/gallon
SOLUBILITY IN WATER	: NIL
APPEARANCE AND ODOR	: Moderately viscous liquid with pungent odor
SPECIFIC GRAVITY (H2O=1)	: 1.0278
EVAPORATION RATE	: Heavier than air

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 74-84° F

METHOD USED: PMCC

FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER: 0.07%
UPPER: 8.9%

EXTINGUISHING MEDIA: Water fog, foam, dry chemical, CO2

OSHA FLAMMABILITY CLASSIFICATION: Combustible liquid, Class I B

SPECIAL FIRE FIGHTING PROCEDURES: Wear goggles and self contained positive pressure breathing equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: With exposure to heat of fire a strong exothermic reaction may cause decomposition and release of toxic fumes. Keep vapors away from sources of ignition. Cool containers with water spray.

SECTION 5: REACTIVITY DATA

STABILITY: Stable under normal conditions. Do not store in direct sunlight or above 100° F

CONDITIONS TO AVOID: Avoid contact with oxidizing compounds, iron or aluminum chlorides or peroxides.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with iron or aluminum chlorides or peroxides.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide, Carbon Dioxide.

HAZARDOUS POLYMERIZATION: May occur.

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Styrene portion is volatile. Vapors can be harmful in high concentrations. Can cause irritation to upper respiratory tract. Can cause narcosis.

SKIN: Prolonged exposure to skin may cause irritation. Not likely to be absorbed at harmful levels.

EYE: Vapors may irritate and cause tears in the eyes. Liquid can cause some corneal injury.

INGESTION: Oral toxicity is low. However, if liquid enters lungs it may be absorbed and cause damage to other organs.

HEALTH HAZARDS (ACUTE AND CHRONIC): No data available.

CARCINOGENICITY:

NTP CARCINOGEN: No

IARC MONOGRAPHS: Yes

OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with potable water immediately for 15 minutes. If irritation develops, get medical attention.

SKIN: Remove with soap and water.

INGESTION: Do not induce vomiting. Get immediate medical attention.

INHALATION: Remove to fresh air. If unconscious, apply mouth to mouth resuscitation. Get medical attention immediately.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Flammable material. Isolate from all sources of ignition. Protect personnel involved in clean-up from vapors of styrene. Soak up spill with absorbent material such as clay and sand.

WASTE DISPOSAL METHOD: Place in containers for disposal. Residual resin may be removed by steam cleaning or with the use of non-flammable solvent such as 1-1-1 Trichloroethane. Burn in an approved incinerator or bury in an approved landfill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers tightly closed when not in use. If mixtures of A and B are allowed to remain in the mixing vessel past pot life deadline, heat and a strong reaction will result.

OTHER PRECAUTIONS: Hazardous waste per SARA III.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: If TLV exceeded, use a NIOSH approved respirator.

VENTILATION: Provide ventilation to keep styrene TLV below the exposure guideline value.

PROTECTIVE GLOVES: Wear protective gloves.

EYE PROTECTION: Wear protective goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear protective body covering clothing when handling.

WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash hands thoroughly after use, before eating or smoking.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
000100-42-5 Sty	rene	<45%

SARA TITLE III SECTION 311/312: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 123 of the Superfund Amendment and Reauthorization Act of 1986 and is considered under applicable definitions to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A fire hazard
- A reactive hazard

D. O. T. PROPER SHIPPING NAME: Flammable liquid, NOS (Styrene Monomer)

PROPER SHIPPING NAME: Flammable liquid, NOS (Styrene Monomer)

HAZARD CLASS: Class 3, Flammable Liquid

UN/NA ID NUMBER: UN 1993

PACKING GROUP: III

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

MATERIAL SAFETY DATA SHEET

VINYL ESTER COATING PART A

PRODUCT NAME: Epoxy.com VINYL ESTER COATING PART A

HMIS CODES: H F R P

PRODUCT CODE: Epoxy.com Product #86 Part A

2 3 2 C

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: EPOXY SYSTEMS, INC.
ADDRESS: 20774 West Pennsylvania Ave
Dunnellon, FL 34431

EMERGENCY NUMBER: 1-800-633-8253
INFORMATION NUMBER: 1-352-489-1666

DATE PRINTED: 12/2008
NAME OF PREPARER: N. LAMBERT

SECTION 2: HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Vinyl Ester Resin	068002-44-8	NE	NE	80-90	YES (IARC)
Styrene*					
Unsaturated Polyester Prepolymer	65556-71-0	NE	NE	0-10	NO
Cobalt Naphthenate**	61789-51-3	NE	.01 mg/m3	0-10	NO

Depending on color one or more of the following may be present:

Titanium Dioxide	13463-67-7		10 mg/m3	NO
Slack Iron Oxide	1317-61-9		10 mg/m3	NO
Red Iron Oxide	1309-37-1		10 mg/m3	NO
Yellow Iron Oxide	51274-00-1		5 mg/m3	NO
Chromium Oxide	1308-38-9		0.5 mg/m3	NO
Titanium Yellow	8007-18-9		10 mg/m3	NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is available as provided in 29 CFR 1910.1200.

*Present at level of 44 wgt% (regulated)

**Present at level of 50 PPM in product (Regulated OSHA 2-1).

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 313° F (styrene)
VAPOR DENSITY : 3.6 (styrene)
VAPOR PRESSURE : 7 mm Hg @ 75° F (styrene)
VOC : 2.9 lbs/gallon
SOLUBILITY IN WATER : NIL
APPEARANCE AND ODOR : Moderately viscous liquid with pungent odor
SPECIFIC GRAVITY (H2O=1) : 1.1566
EVAPORATION RATE : Heavier than air

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 74-84° F

METHOD USED: PMCC

FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER: 0.07%

UPPER: 8.9%

EXTINGUISHING MEDIA: Water fog, foam, dry chemical, CO2

OSHA FLAMMABILITY CLASSIFICATION: Combustible liquid, Class I B

SPECIAL FIRE FIGHTING PROCEDURES: Wear goggles and self contained positive pressure breathing equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: With exposure to heat of fire a strong exothermic reaction may cause decomposition and release of toxic fumes. Keep vapors away from sources of ignition. Cool containers with water spray.

SECTION 5: REACTIVITY DATA

STABILITY: Stable under normal conditions. Do not store in direct sunlight or above 100° F

CONDITIONS TO AVOID: Avoid contact with oxidizing compounds.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid contact with iron or aluminum chlorides or peroxides.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide.

HAZARDOUS POLYMERIZATION: May occur

SECTION 6: HEALTH HAZARD DATA

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Styrene portion is volatile. Vapors can be harmful in high concentrations. Can cause irritation to upper respiratory tract. Can cause narcosis.

SKIN: Prolonged exposure to skin may cause irritation. Not likely to be absorbed at harmful levels.

EYE: Vapors may irritate and cause tears in the eyes. Liquid can cause some corneal injury.

INGESTION: Oral toxicity is low. However, if liquid enters lungs it may be absorbed and cause damage to other organs.

HEALTH HAZARDS (ACUTE AND CHRONIC): No data available.

CARCINOGENICITY:

NTP CARCINOGEN: No

IARC MONOGRAPHS: Yes

OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with potable water immediately for 15 minutes. If irritation develops, get medical attention.

SKIN: Remove with soap and water.

INGESTION: Do not induce vomiting. Get immediate medical attention.

INHALATION: Remove to fresh air. If unconscious, apply mouth to mouth resuscitation. Get medical attention immediately.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Flammable material. Isolate from all sources of ignition. Protect personnel involved in clean-up from vapors of styrene. Soak up spill with absorbent material such as clay and sand.

WASTE DISPOSAL METHOD: Place in containers for disposal. Residual resin may be removed by steam cleaning or with the use of non-flammable solvent such as 1-1-1 Trichloroethane. Burn in an approved incinerator or bury in an approved landfill.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers tightly closed when not in use. If mixtures of A and B are allowed to remain in the mixing vessel past pot life deadline, heat and a strong reaction will result.

OTHER PRECAUTIONS: Hazardous waste per SARA III.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: If TLV exceeded, use a NIOSH approved respirator.

VENTILATION: Provide ventilation to keep styrene TLV below the exposure guideline value.

PROTECTIVE GLOVES: Wear protective gloves.

EYE PROTECTION: Wear protective goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear protective body covering clothing when handling.

WORK/HYGIENIC PRACTICES: Practice good industrial hygiene. Wash hands thoroughly after use, before eating or smoking.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
000100-42-5 Sty	rene	<45%

SARA TITLE III SECTION 311/312: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 123 of the Superfund Amendment and Reauthorization Act of 1986 and is considered under applicable definitions to meet the following categories:

An immediate health hazard

A delayed health hazard

A fire hazard

A reactive hazard

D. O. T. PROPER SHIPPING NAME: Flammable liquid, NOS (Styrene Monomer)

PROPER SHIPPING NAME: Flammable liquid, NOS (Styrene Monomer)

HAZARD CLASS: Class 3, Flammable Liquid

UN/NA ID NUMBER: UN 1993

PACKING GROUP: III

SECTION 10: DISCLAIMER

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.

**MATERIAL SAFETY DATA SHEET
VINYL ESTER COATING/BINDER PART B**

PRODUCT NAME: EPOXY.COM VINYL ESTER COATING/BINDER PART B
PRODUCT CODE: Epoxy.com Product #85 Part B and/or Product #86 Part B

HMIS CODES: H F R P
3 3 2 C

SECTION 1: MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: EPOXY SYSTEMS, INC.
ADDRESS: 20774 West Pennsylvania Ave
Dunnellon, FL 34431
EMERGENCY NUMBER: 1-800-633-8253
INFORMATION NUMBER: 1-352-489-1666
DATE PRINTED: 12/2008
NAME OF PREPARER: N. LAMBERT

SECTION 2: HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Cumene Hydroperoxide*	80-15-9	NE	NE	90-100	NO

Substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard. Where proprietary ingredient is listed, the identity is provided in 29 CFR 1910.1200.

*This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40 CFR 372. See Section 9: Regulatory Information of this MSDS.

NE - Not Established

SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE	: NE
VAPOR DENSITY (AIR = 1)	: 5.4
VAPOR PRESSURE	: 1mm @ 73° C
VOC	: 100% by volume
SOLUBILITY IN WATER	: Slight
APPEARANCE	: Clear to yellow liquid with sharp aromatic odor
SPECIFIC GRAVITY (H20=1)	: 1.028
EVAPORATION RATE	: Heavier than air

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 133° F

METHOD USED: PMCC

FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER: NE
UPPER: NE

EXTINGUISHING MEDIA: Water fog, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES: If large amount is involved, evacuate area and fight fire from safe distance. Cool surrounding material with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contamination, Temperature - Can decompose with force if confined during exposure to fire or contaminated with transition metals such as Cobalt.

SECTION 5: REACTIVITY DATA

STABILITY: Unstable

CONDITIONS CONTRIBUTING TO INSTABILITY: Exposure to heat, contamination.

INCOMPATIBILITY: Avoid contact with strong acids, strong oxidizers, strong alkalis, transition metal salts, reducing agents and vermiculite.

CONDITIONS TO AVOID: Heat, flames, sparks, ignition sources, contamination.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Decomposition products are flammable.

SECTION 6: HEALTH HAZARD DATA

TOXICITY DATA: The acute toxicity data for the most hazardous component of the mixture is shown below.

ORAL LD 50: (rat) 800-1600 mg/Kg*
DERMAL LD 50: (rabbit) severe irritation (delayed)*
INHALATION LD 50: (rat) 700 ppm*

*Tests run on 83% material.

MUTAGENICITY

AMES TEST: Positive
DOMINANT LETHAL MUTATION TEST (mice): Negative

CARCINOGENICITY:

SKIN PAINTING (mice): Not carcinogenic
SUBCUTANEOUS INJECTION (mice): Not carcinogenic
SUBCUTANEOUS INJECTION (rats): Not carcinogenic

HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

INHALATION: Narcotic effects. Respiratory irritant.
SKIN: Severe corrosivity and sensitization to skin.
EYE: Severe corrosivity to eyes.
OTHER: Depilation (195 applications)

EMERGENCY AND FIRST AID PROCEDURES:

EYES: IMMEDIATELY flush with plenty of water for at least 15 minutes. Get medical attention.
SKIN: Remove contaminated clothing and launder. Wash with soap and water. Get medical attention.
INGESTION: DO NOT induce vomiting. Get emergency medical attention for gavage.
INHALATION: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb with soda ash. Sweep or scoop up using non-sparking tools and dispose immediately. DO NOT USE VERMICULITE.

WASTE DISPOSAL METHOD: Dispose of in accordance with Federal, State, and Local regulations for hazardous waste.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store near combustibles. Empty container may contain hazardous residues. Keep container closed when not in use. Keep away from heat, sparks and flames. Do not reuse container. Store below 100° F to maintain active oxygen content.

OTHER PRECAUTIONS: Wash thoroughly after handling. Do not get in eyes, on skin or clothing.

SECTION 8: CONTROL MEASURES

RESPIRATORY PROTECTION: Use only NIOSH/MSHA approved organic vapor cannister or cartridge type respirator.

VENTILATION: Use with adequate ventilation and local exhaust.

PROTECTIVE GLOVES: Wear neoprene, polyvinyl, natural rubber, or butyl rubber gloves.

EYE PROTECTION: Wear chemical type face shield and goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Provide eye wash station.

WORK/HYGIENIC PRACTICES: Wash thoroughly after handling. Do not get in eyes, on skin or clothing.

SECTION 9: REGULATORY INFORMATION

SARA TITLE III SECTION 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	RQ lbs.	Percent by Weight
80-15-9	Cumene hydroperoxide	10	£ 90%

D. O. T. PROPER SHIPPING NAME: Organic peroxide type F (Cumene Hydroperoxide), Class 5.2, UN3109, PG II

PROPER SHIPPING NAME: Organic peroxide type F (Cumene Hydroperoxide)

HAZARD CLASS: Class 5.2 Organic Peroxide

UN/NA ID NUMBER: UN 3109

PACKING GROUP: II

SECTION 10: DISCLAIMER

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