



HASTINGS FIBER GLASS PRODUCTS Inc.

PHONE: (616) 945-9541

TELEX NO. 22-6378

P.O. BOX 218, 770 COOK ROAD
HASTINGS, MICHIGAN 49058

Material Safety Data Sheet

Information on this form is furnished solely for the purpose of compliance with the requirements of the Occupational Safety and Health Administration. To the best of our knowledge, the information is accurate. However, Hastings Fiber Glass does not assume liability since the information was compiled from published data.

Section # 1 Chemical Synonyms

Trade Name 10-105 Epoxy Reducer
Chemical Group Ketones, Alcohols, Esters, Glycol Ethers,
Aliphatic Hydrocarbons

Section # 2 Hazardous Ingredients

Ingredients	TLV Units - PPM	Ingredients	TLV Units - PPM
1. <u>Acetone</u>	<u>1000</u>	6. <u>Toluol</u>	<u>100</u>
2. <u>Isopropyl Alcohol 99%</u>	<u>400</u>	7. _____	_____
3. <u>M.I.B.K.</u>	<u>200</u>	8. _____	_____
4. <u>Extasolve EE Acetate</u>	<u>300</u>	9. _____	_____
5. <u>Oxitol</u>	<u>100</u>	10. _____	_____

Section # 3 Physical Data

Boiling Range 130-308°F Specific Gravity 0.918
Vapor Pressure _____ % Volatile by Volume 100
Solubility in Water 40% Evaporation Rate 960 In Seconds
Appearance and Odor - Colorless liquid and distinct, and aromatic.

Section # 4 Fire and Explosion Hazard

Flash Point 5°F Method Closed Cup
Extinguishing Media Foam, CO2, Steam, Water-Fog, Dry Chemicals
Special Fire Fighting Procedure Close or confined quarters require self contained breathing apparatus.

Material Safety Data SheetSection # 4 Fire and Explosion Hazard - Continued

Fire and Explosion Hazards Serious because of low flash points, and high volatility.

Section # 5 Precaution of Handling

Precaution of Handling Materials are flammable, keep away from heat, sparks, fire. Use with adequate ventilation. Avoid prolonged contact with skin, use spark resistant tools.

Section # 6 Health Hazard DataThreshold Limit Value100Effects of Over Exposure

Poisonous if swallowed. Irritation to eyes, nose and throat. Prolonged contact may cause headache, dizziness and nausea.

Emergency and First Aid Procedures

Remove victim to fresh air and restore breathing if required. Call a physician.
Flush solvent from skin with soap and water. Flush eyes with water. Do not induce vomiting.

Section # 7 Reactivity DataMaterial is StableMaterials to Avoid

Strong oxidizing agents.

Section # 8 Spill or Leak ProceduresExtinguish all Flames

Dike large spills. If allowed to enter sewer, dilute with large quantities of water, and contact authorities.

Section # 9Respiratory Protection

Organic canisters make an air pack.

Local Exhaust

Yes

Protective Gloves

Rubber

Eye Protection

Chemical Safety goggles

All Electrical Systems

Spark proof (Explosion proof type)

MATERIAL SAFETY DATA SHEET

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Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

December 1977

SECTION I

MANUFACTURER'S NAME HASTINGS FIBER GLASS PRODUCTS, INC. 770 Cook Road, Hastings, MI 49058		EMERGENCY TELEPHONE NO. (616) 945-9541
CHEMICAL NAME AND SYNONYMS 1,1,1-trichloroethane; methylchloroform	TRADE NAME AND SYNONYMS 10-089	
CHEMICAL FAMILY Halogenated Hydrocarbons	FORMULA CH ₃ CCl ₃	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Stabilized 1,1,1-trichloroethane				100	350 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	165.4	SPECIFIC GRAVITY (H ₂ O=1)	1.31
VAPOR PRESSURE (mm Hg.)	120	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	4.54	EVAPORATION RATE (ethyl ether=1)	0.35
SOLUBILITY IN WATER	Negligible	Molecular Weight	132
APPEARANCE AND ODOR	Clear, colorless liquid; ether-like odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	See attached sheet.	FLAMMABLE LIMITS	LeI	UeI
EXTINGUISHING MEDIA	Water, dry chemical or carbon dioxide			
SPECIAL FIRE FIGHTING PROCEDURES	Wear pressure-demand self-contained breathing apparatus for possible exposure to hydrogen chloride and phosgene.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Vapors can be ignited by high intensity source of ignition. Can decompose or burn to form hydrogen chloride and traces of phosgene.			

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SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	350 ppm -- 8-hour TWA (OSHA -- 29 CFR 1910.1000)
EFFECTS OF OVEREXPOSURE	See attached sheet.
EMERGENCY AND FIRST AID PROCEDURES	See attached sheet.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID Avoid open flames, hot glowing surfaces and electric arcs.
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) Avoid mixing with caustic soda, caustic potash or oxidizing materials.			
HAZARDOUS DECOMPOSITION PRODUCTS HCl and possible traces of phosgene.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Immediately evacuate area and provide maximum ventilation. Only personnel equipped with proper respiratory and skin/eye protection should be allowed in area. Collect spilled material on sawdust or vermiculite and sweep into closed containers for disposal. Then flush area with plenty of water and maintain ventilation until vapors are eliminated.	
WASTE DISPOSAL METHOD	EPA-approved incineration or contact local waste disposal contractor.

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION (Specify type) See attached sheet.		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) Sufficient to maintain workplace concentration below TLV.	OTHER
PROTECTIVE GLOVES Polyethylene, neoprene, or polyvinyl alcohol.	EYE PROTECTION Splash-proof goggles used in accordance with 20 CFR 1910.133.	
OTHER PROTECTIVE EQUIPMENT Safety shoes, eye-wash fountain.		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	See attached sheet.
OTHER PRECAUTIONS	See attached sheet.

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ADDENDUM TO MATERIAL SAFETY DATA SHEET

ON TRI-ETHANE 1,1,1-TRICHLOROETHANE (December, 1977)

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash Point - None when tested in accordance with standard accepted laboratory techniques; however, 1,1,1-trichloroethane vapors concentrated in a confined or poorly ventilated area can be ignited upon contact with a spark, flame or high-intensity source of heat. This can occur at concentrations ranging between 8 percent and 15 percent by volume.

SECTION V -- HEALTH HAZARD DATA

Acute Toxicity Values⁽¹⁾ - Oral LD₅₀ (rat): 10 - 12 gm/kg.
Oral LD₅₀ (rabbit, guinea pig): 5.6 - 9.5 gm/kg
Inhalation LC₅₀ (rat): 8,000 ppm/7 hours

Effects of Overexposure

Acute: Primarily a central nervous system depressant. Inhalation can cause irritation of the respiratory system, dizziness, nausea, lightheadedness, headache, loss of coordination and equilibrium, unconsciousness, and even death in confined or poorly ventilated areas. Depression of the circulatory system has been reported as a result of overexposure to methyl chloroform. Ventricular arrhythmia may be induced after sensitization to epinephrine.

Eye contact can result in discomfort, pain and irritation. Prolonged or repeated contact with the skin can cause irritation and dermatitis.

Chronic: Torkelson, et. al. (1959) reported that female guinea pigs had slight inflammation of lungs and fatty changes in liver at chronic exposure concentrations of 2,000 ppm, although no evidence can presently be found to confirm any chronic exposure hazard to humans.

Emergency and First Aid Procedures

Inhalation Overexposure: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Note to Physician: Avoid use of adrenalin in any case where a person has been overcome by 1,1,1-trichloroethane.

Eye Contact: Flush with plenty of water for at least fifteen minutes. If irritation occurs, consult a physician.

Skin Contact: Wash thoroughly with plenty of soap and water. If irritation occurs, consult a physician.

Swallowing: If conscious, drink a quart of water then induce vomiting by placing a finger far back in the throat. Call a physician. If vomiting cannot be induced, take immediately to a hospital or physician. If unconscious, or in convulsions, take immediately to a hospital or physician. DO NOT induce vomiting or give anything by mouth.

SECTION VIII -- SPECIAL PROTECTION INFORMATION

Respiratory Protection -- NIOSH/MESA approved organic vapor respirator for concentrations below 1000 ppm. For 1000 ppm and above, use air-supplied respiratory protection. Consult 29 CFR 1910.134 for details.

SECTION IX -- SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

- Do not use in poorly ventilated or confined spaces.
- Keep containers tightly closed when not in use.
- Do not store in open, unlabeled or mislabeled containers.
- Do not store degreaser clean-out sludge in tightly sealed containers.
- Sludge containing finely divided aluminum residues should be stored out of doors away from combustible materials.
- Liquid oxygen or other strong oxidizers may form explosive mixtures with 1,1,1-trichloroethane when mixed in confined areas.
- Under certain conditions, decomposition may occur followed by release of hydrogen chloride vapors when 1,1,1-trichloroethane is blended with other organic materials such as toluene. Before performing any such blending operations, consult with PPG on potential hazards involved.

Other Precautions

- Avoid prolonged or repeated breathing of vapor.
- Use only with ventilation sufficient to limit employee exposure below OSHA permissible exposure limit.
- Avoid contact with eyes.
- Avoid prolonged or repeated contact with skin.
- Do not take internally.

MATERIAL SAFETY DATA SHEET

NFPA 704

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor. Essentially Similar to Form OSHA-20)

DATE OF PREP 5/28/82

Section I

MANUFACTURER'S NAME HASTINGS FIBER GLASS PRODUCTS, INC.
 STREET ADDRESS 770 Cook Road
 P.O. Box 218 CITY, STATE, AND ZIP CODE Hastings, MI 49058

EMERGENCY TELEPHONE NO 616-945-9541
 INFORMATION TELEPHONE NO 616-945-9541

PRODUCT CLASS Epoxy Resin Paint
 MANUFACTURERS CODE IDENTIFICATION "A" 10-100 or 10-110

TRADE NAME Part "A" 10-100 or 10-110

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	mg/M ³		
Xylene	33.25	100	435	1.0	0.14psi @ 38°C (100°F)
Methyl Isoamyl Ketone	4.52	100	---	1.0	4.5mmHg @ 20°C (68°F)
Methyl Isobutyl Ketone	7.91	100	---	1.4	0.70psi @ 38°C (100°F)
Epoxy Resin	12.76	100	---	---	5mmHg @ 25°C (77°F)
ene	0.72	100	---	1.3	25mmHg

Section III - PHYSICAL DATA

BOILING RANGE 110°-141°C (230°286°F) VAPOR DENSITY HEAVIER. LIGHTER THAN AIR

VAPORATION RATE FASTER SLOWER THAN ETHER PERCENT VOLATILE BY VOLUME 46.40 WEIGHT PER GALLON 8.17 lbs. approx.

Section IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION Paint Flammable Liquid UN1263 FLASH POINT 40°F (5°C) LEL 1.0

EXTINGUISHING MEDIA Extinguishers; National Fire Protection Association (NFPA) Class IB for flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Remove from sources of electricity, sparks, heat, and open flames. Explosion of tightly sealed containers are incident to extreme heat. Application to hot surfaces not recommended.

LOCAL FIRE FIGHTING PROCEDURES Water: 1. Used to cool, as a hinderance to increasing pressure and to prevent autoignition or explosion. 2. Not recommended, however fog nozzles are acceptable with water systems. 3. May be ineffective to fight fires and can possibly augment a dangerous situation. Self-contained breathing equipment is advocated. Systems suggested for Fire Protection: carbon dioxide, foam or dry chemical. Close or shut off supply source if safe to do so.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II

EFFECTS OF OVEREXPOSURE Eye: Primary irritation upon direct contact. Skin: Moderately irritating. Respiratory System: Possible upper respiratory tract irritation. Other:

ACUTE Acute nervous system depression denoted by symptoms of confusion, general lethargy, dizziness, headache, staggering movement, unconsciousness or coma.

CHRONIC

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Transfer victim to a location of fresh air. Administer artificial respiration to restore breathing. Eye Contact: Flush ocular area with copious amounts of water for 15 minutes minimum. Skin: Wash with a cleanser and water. Eliminate contact with contaminated clothing. Ingestion: Consult a Poison Control Center or physician. Attain medical attention if required by existing circumstance.

Section VI – REACTIVITY DATA

STABILITY UNSTABLE STABLE

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide, silicone dioxide, carbon dioxide, aldehydes, hydrocarbons and other organics.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR

CONDITIONS TO AVOID Epoxy resins under uncontrolled conditions.

CONDITIONS TO AVOID Sparks, flames and other ignition sources. Non-ventilation in areas of product usage. Open containers during non-use. Storage of contaminated rags or clothing in a closed container. Daily removal is recommended.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove sources of ignition, hot surfaces and sparks (caused by static or friction). Refrain from breathing vapor fumes unprotected and restrict personal contact with material. Ventilate area adequately. Eliminate source of spill or leak if safety permits. Use inert absorbant material and non-sparking tools.

WASTE DISPOSAL METHOD Dispose of waste in a proper manner as to comply with local, state and federal regulation.

Section VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Open Areas: Mechanical filter respirator, approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety & Health (NIOSH) to prevent inhalation of solid overspray particles. Restricted Ventilation Areas: Chemical mechanical filters, MSHA and NIOSH approved to remove vapor and solid particles. Confined Areas: Airline respirator or hood as approved by MSHA and NIOSH.

VENTILATION Work areas should be maintained below acceptable TLV limits as stated in Section II. Levels may be achieved through general mechanical ventilation and local exhaust systems.

PROTECTIVE GLOVES Solvent resistant rubber gloves required for sustained or repetitive contact.

EYE PROTECTION Safety eyewear intended to guard against splashing liquids.

OTHER PROTECTIVE EQUIPMENT Eye wash, safety shower, protective overalls to reduce clothing contamination.

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not exceed 110° F for storage. Ground containers when transferring materials.

DOL STORAGE CATEGORY

OTHER PRECAUTIONS Do not transfer material to unmarked container. Do not ingest. Use in accordance with proper industrial and personal hygiene. Read all warning labels carefully. Moisture entering material will cause product contamination. Keep containers closed when not in use. Maintain tight closure and store upright. Avoid free fall of material beyond a decimeter. Storage: NFPA for Class IB flammable liquids.

Information provided on MSDS is considered accurate and is presented for your consideration and selection. No implied or expressed warranty is provided on this basis. Responsibility for injury or damages due to non-recommended usage of the product is not resumed by Peterson Chemical Corporation. Reasonable safety guidelines should be adhered to as presented. Furthermore, purchaser assumes all risk in use of the material.

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor. Essentially Similar to Form OSHA-201)

DATE OF PREP 5/28/82

Section I

MANUFACTURER'S NAME

HASTINGS FIBER GLASS PRODUCTS, INC.

STREET ADDRESS

770 Cook Road
P.O. Box 218

CITY, STATE AND ZIP CODE

Hastings, MI 49058

EMERGENCY TELEPHONE NO

616-945-9541

INFORMATION TELEPHONE NO

616-945-9541

PRODUCT CLASS

Epoxy Hardner Paint

MANUFACTURERS CODE IDENTIFICATION

"B" M 10-100 or 10-110

TRADE NAME

Part "B" 10-100 or 10-110

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	mg/M ³		
Xylene	60.25	100	435	1.0	0.14psi @ 38°C (100°F)
Ethylene Glycol Monobutyl Ether	5.65	50	---	---	0.6mmHg @ 20°C (68°F)
Butanol	1.66	50	---	1.7	15mmHg---

Section III - PHYSICAL DATA

BOILING RANGE 116°-171°C (245°-340°F) VAPOR DENSITY HEAVIER. LIGHTER THAN AIR

EVAPORATION RATE FASTER SLOWER THAN ETHER PERCENT VOLATILE BY VOLUME 67.55 WEIGHT PER GALLON 7.45 lbs. approx.

Section IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION Paint Flammable Liquid UN 1263 FLASH POINT 27° (80°F) LEL 1.0

EXTINGUISHING MEDIA Extinguishers; National Fire Protection Association (NFPA) Class IB for flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Remove from sources of electricity, sparks, heat, and open flames. Explosion of tightly sealed containers are incident to extreme heat. Application to hot surfaces is not recommended.

FIRE FIGHTING PROCEDURES Water: 1. Used to cool, as a hinderance to increasing pressure and to prevent autoignition or explosion. 2. Not recommended, however fog nozzles are acceptable with water systems. 3. May be ineffective to fight fires and can possibly augment a dangerous situation. Self-contained breathing equipment is advocated. Systems suggested for Fire Protection: Carbon dioxide, foam or dry chemical. Close or shut off supply source if safe to do so.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II

EFFECTS OF OVEREXPOSURE Eye: Primary irritation upon direct contact. Skin: Moderately irritating. Respiratory System: Possible upper respiratory tract irritation. Other:

ACUTE Acute nervous system depression denoted by symptoms of confusion, general lethargy, dizziness, headache, staggering movement, unconsciousness or coma.

CHRONIC

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Transfer victim to a location of fresh air. Administer artificial respiration to restore breathing. Eye Contact: Flush ocular area with copious amounts of water for 15 minutes minimum. Skin: Wash with a cleanser and water. Eliminate contact with contaminated clothing. Ingestion: Consult a Poison Control Center or physician. Attain medical attention if required by existing circumstance.

Section VI – REACTIVITY DATA

STABILITY UNSTABLE STABLE

COMPATIBILITY (Materials to avoid):

HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide, aldehydes, silicone dioxide, carbon dioxide, various hydrocarbons and other organics.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR

CONDITIONS TO AVOID Sparks, flames and other ignition sources. Non-ventilation in areas of product usage. Open containers during non-use. Storage of contaminated rags or clothing in a closed container. Daily removal is recommended.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove sources of ignition, hot surfaces and sparks caused by static or friction). Refrain from breathing vapor fumes unprotected and restrict personal contact with material. Ventilate area adequately. Eliminate source of spill or leak if safety permits. Use inert absorbant material and non-sparking tools.

WASTE DISPOSAL METHOD Dispose of waste in a proper manner as to comply with local, state and federal regulation.

Section VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Open Areas: Mechanical filter respirator, approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety & Health (NIOSH) to prevent inhalation of solid overspray particles. Restricted Ventilation Areas: Chemical mechanical filters, MSHA and NIOSH approved to remove vapor and solid particles. Confined Areas: Airline respirator or hood as approved by MSHA and NIOSH.

VENTILATION Work areas should be maintained below acceptable TLV limits as stated in Section II. Levels may be achieved through general mechanical ventilation and local exhaust systems.

PROTECTIVE GLOVES Solvent resistant rubber gloves required for sustained or repetitive contact.

EYE PROTECTION Safety eyewear intended to guard against splashing liquids.

OTHER PROTECTIVE EQUIPMENT Eye wash, safety shower, protective overalls to reduce clothing contamination.

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not exceed 110° F. for storage. Ground containers when transferring materials.

DOL STORAGE CATEGORY

OTHER PRECAUTIONS Do not transfer material to unmarked container. Do not ingest. Use in accordance with proper industrial and personal hygiene. Read all warning labels carefully. Moisture entering material will cause product contamination. Keep containers closed when not in use. Maintain tight closures and store upright. Avoid free fall of material beyond a decimeter. Storage: NFPA for Class IB flammable liquids.

Information provided on MSDS is considered accurate and is presented for your consideration and inspection. No implied or expressed warranty is provided on this basis. Responsibility for injuries or damages due to non-recommended usage of the product is not resumed by Peterson Chemical Corporation. Reasonable safety guidelines should be adhered to as presented. Furthermore, purchaser assumes all risk in use of the material.

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor. Essentially Similar to Form OSHA-201)

DATE OF PREP. 3-30-82

Section I

MANUFACTURER'S NAME HASTINGS FIBER GLASS PRODUCTS, INC.

STREET ADDRESS 770 Cook Road
P.O. Box 218

CITY, STATE, AND ZIP CODE Hastings, MI 49058

EMERGENCY TELEPHONE NO. 616-945-9541

INFORMATION TELEPHONE NO. 616-945-9541

PRODUCT CLASS Epoxy Resin Paint

MANUFACTURER'S CODE IDENTIFICATION

10-101 or 10-111

TRADE NAME Part A 10-101 or 10-111

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	mg/m ³		
Xylene	13.98	100	435	1.0	0.14 psi @ 38°C (100°F)
Methyl Isobutyl Ketone	6.32	100	--	1.4	0.70 psi @ 38°C (100°F)
Isopropyl Alcohol	1.56	400	--	2.0	2.00 psi @ 38°C (100°F)
Methyl Isoamyl Ketone	3.12	100	--	1.0	4.5 mmHg @ 20°C (68°F)
Aromatic Petroleum Hydrocarbon	0.25	100	475	1.0	19.4 mmHg @ 20°C (68°F)
Aliphatic Petroleum Hydrocarbon	0.25	500	2000	1.0	2.0 mmHg @ 20°C (68°F)

Section III - PHYSICAL DATA

BOILING RANGE 181°-385°F (82.6-195.8°C)

VAPOR DENSITY HEAVIER, LIGHTER THAN AIR

EVAPORATION RATE FASTER SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME 25.74

WEIGHT PER GALLON Approx. 12.83 lbs.

Section IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION Paint Flammable Liquid
U.N. 1263

FLASH POINT 53°F (11.7°C)

LEL 1.0

EXTINGUISHING MEDIA Extinguishers: National Fire Protection Association (NFPA) Class IB for flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Remove from sources of electricity, sparks, heat and open flames. Explosion of tightly sealed containers are incident to extreme heat. Application to hot surfaces is not recommended.

SPECIAL FIRE FIGHTING PROCEDURES Water: 1. Used to cool, as a hinderance to increasing pressure and to prevent autoignition or explosion. 2. Not recommended, however fog nozzles are acceptable with water systems. 3. May be ineffective to fight fires and can possibly augment a dangerous situation. Self-contained breathing equipment is advocated. Systems suggested for Fire Protection: Carbon dioxide, foam or dry chemical. Close or shut off supply source if safe to do so.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II

EFFECTS OF OVEREXPOSURE Eye: Primary irritation upon direct contact. Skin: Moderately irritating

ACUTE Respiratory System: Possible upper respiratory tract irritation. Other: Acute nervous system depression denoted by symptoms of confusion, general lethargy, dizziness, headache, staggering movement, unconsciousness or coma.

CHRONIC Coma.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Transfer victim to a location of fresh air. Administer artificial respiration to restore breathing. **Eye Contact:** Flush ocular area with copious amounts of water for 15 minutes minimum. **Skin:** Wash with a cleanser and water. Eliminate contact with contaminated clothing. **Ingestion:** Consult a Poison Control Center or physician. Attain medical attention if required by existing circumstance.

Section VI – REACTIVITY DATA

STABILITY UNSTABLE STABLE

INCOMPATIBILITY (Materials to avoid) Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS Carbon dioxide, carbon monoxide and various hydrocarbons.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR

CONDITIONS TO AVOID Sparks, flames and other ignition sources. Non-ventilation in areas of product usage. Open containers during non-use. Storage of contaminated rags or clothing in a closed container. Daily removal is recommended.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove sources of ignition, hot surfaces and sparks (caused by static or friction). Refrain from breathing vapor fumes unprotected and restrict personal contact with material. Ventilate area adequately. Eliminate source of spill or leak if safety permits. Use inert absorbant material and non-sparking tools.

WASTE DISPOSAL METHOD Dispose of waste in a proper manner as to comply with local, state and federal regulation.

Section VIII – SPECIAL PROTECTION INFORMATION

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VENTILATION Work areas should be maintained below acceptable TLV limits as stated in Section II. Levels may be achieved through general mechanical ventilation and local exhaust systems.

PROTECTIVE GLOVES Solvent resistant rubber gloves required for sustained or repetitive contact.

EYE PROTECTION Safety eyewear intended to guard against splashing liquids.

OTHER PROTECTIVE EQUIPMENT Eye wash, safety shower, protective overalls to reduce clothing contamination.

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not exceed 110° F. for storage. Ground containers when transferring materials.

DOT STORAGE CATEGORY

OTHER PRECAUTIONS Do not transfer material to unmarked container. Do not ingest. Use in accordance with proper industrial and personal hygiene. Read all warning labels carefully. Moisture entering material will cause product contamination. Keep containers closed when not in use. Maintain tight closures and store upright. Avoid free fall of material beyond a decimeter. Storage: NFPA for Class IB flammable liquids.

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MATERIAL SAFETY DATA SHEET

NFCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor Essentially Similar to Form OSHA-201)

DATE OF PREP 3-30-82

Section I

MANUFACTURER'S NAME

HASTINGS FIBER GLASS PRODUCTS, INC.

STREET ADDRESS

770 Cook Road
P.O. Box 218

CITY, STATE, AND ZIP CODE

Hastings, MI 49058

EMERGENCY TELEPHONE NO

616-945-9541

INFORMATION TELEPHONE NO

616-945-9541

PRODUCT CLASS Epoxy Resin Paint

MANUFACTURER'S CODE IDENTIFICATION Gloss Hardner, "B"
10-101 or 10-111

TRADE NAME

Gloss Hardner, Part "B" 10-101 or 10-111

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	MG/M ³		
Xylene	62.31	100	435	1.0	0.14 psi @ 38°C (100°F)
Ethylene Glycol Monobutyl Ether	5.84	50	---	---	0.6 mmHg. 20°C (68°F)

Section III - PHYSICAL DATA

BOILING RANGE 138°C - 171°C (281°F - 340°F)

VAPOR DENSITY



HEAVIER.



LIGHTER THAN AIR

EVAPORATION RATE



FASTER



SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME 68.158

WEIGHT PER GALLON

Approx. 7.45 lbs.

Section IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION U.N. -1263 Paint Flammable Liquid

FLASH POINT 27°C. (81°F)

LEL 0

EXTINGUISHING MEDIA Extinguishers: National Fire Protection Association (NFPA) Class IB for flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Remove from sources of electricity, sparks, heat and open flames. Explosion of tightly sealed containers are incident to extreme heat. Application to hot surfaces is not recommended.

SPECIAL FIRE FIGHTING PROCEDURES Water: 1. Used to cool, as a hinderance to increasing pressure and to prevent autoignition or explosion. 2. Not recommended, however fog nozzles are acceptable with water systems. 3. May be ineffective to fight fires and can possibly augment a dangerous situation. Self-contained breathing equipment is advocated. Systems suggested for Fire Protection: Carbon dioxide, foam or dry chemical. Close or shut off supply source if safe to do so.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II

EFFECTS OF OVEREXPOSURE Eye: Primary irritation upon direct contact. Skin Moderately irritating. Respiratory System: Possible upper respiratory tract irritation. Other

ACUTE Acute nervous system depression denoted by symptoms of confusion, g lethargy, dizziness, headache, staggering movement, unconsciousness or

CHRONIC coma.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Transfer victim to a location of fresh air. Administer artificial respiration to restore breathing. Eye Contact: Flush ocular area with copious amounts of water for 15 minutes minimum. Skin: Wash with a cleanser and water. Eliminate contact with contaminated clothing. Ingestion: Consult a Poison Control Center or physician. Attain medical attention if required by existing circumstance.

Section VI – REACTIVITY DATA

STABILITY UNSTABLE STABLE

INCOMPATIBILITY (Materials to avoid) **CONDITIONS TO AVOID** Sparks, flames and other ignition sources. Non-ventilation in areas of product usage. Open containers during non-use. Storage of contaminated rags or clothing in a closed container. Daily removal is recommended.

HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR

CONDITIONS TO AVOID Epoxy Resins under uncontrolled conditions.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove sources of ignition, hot surfaces and sparks (caused by static or friction). Refrain from breathing vapor fumes unprotected and restrict personal contact with material. Ventilate area adequately. Eliminate source of spill or leak if safety permits. Use inert absorbant material and non-sparking tools.

WASTE DISPOSAL METHOD Dispose of waste in a proper manner as to comply with local, state and federal regulation.

Section VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Open Areas: Mechanical filter respirator, approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety & Health (NIOSH) to prevent inhalation of solid overspray particles. Restricted Ventilation Areas: Chemical mechanical filters, MSHA and NIOSH approved to remove vapor and solid particles. Confined Areas: Airline respirator or hood as approved by MSHA and NIOSH.

VENTILATION Work areas should be maintained below acceptable TLV limits as stated in Section Levels may be achieved through general mechanical ventilation and local exhaust systems.

PROTECTIVE GLOVES Solvent resistant rubber gloves required for sustained or repetitive contact.

EYE PROTECTION Safety eyewear intended to guard against splashing liquids.

OTHER PROTECTIVE EQUIPMENT Eye wash, safety shower, protective overalls to reduce clothing contamination.

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Do not exceed 110° F for storage. Ground containers when transferring materials.

DOL STORAGE CATEGORY

OTHER PRECAUTIONS Do not transfer material to unmarked container. Do not ingest. Use in accordance with proper industrial and personal hygiene. Read all warning labels carefully. Moisture entering material will cause product contamination. Keep containers closed when not in use. Maintain tight closures and store upright. Avoid free fall of material beyond a decimeter. Storage: NFPA for Class IB flammable liquids.

Information provided on MSDS is considered accurate and is presented for your consideration. No implied or expressed warranty is provided on this basis. Responsibility for injury or damages due to non-recommended usage of the product is not resumed by Peterson Chemical Corporation. Reasonable safety guidelines should be adhered to as presented. Furthermore, purchaser assumes all risk in use of the material.

MATERIAL SAFETY DATA SHEET

Required under USOL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME Hastings Fiber Glass Products, Inc.		EMERGENCY TELEPHONE NO. 616-945-9541
ADDRESS (Number, Street, City, State, and ZIP Code) 770 Cook Road, Hastings, Michigan 49058		
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS #10-091 Basic Paste Wax
CHEMICAL FAMILY Hydrocarbon	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS	70		FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O=1)	
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ -1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR	Light Yellow/Slight Solvent Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	T.C.C. 94° F	FLAMMABLE LIMITS	Lel 1.0	Uel 7.0
EXTINGUISHING MEDIA	Exclude Air Use CO ₂ , Foam, Dry Chemicals.			
SPECIAL FIRE FIGHTING PROCEDURES	Do Not Use Water Except As A Fog			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Handle as a Combustible Material			

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	
EFFECTS OF OVEREXPOSURE Slightly irritative to skin and eyes.	
EMERGENCY AND FIRST AID PROCEDURES Remove from skin with soap and water. Flush eyes with water.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) Not Applicable			
HAZARDOUS DECOMPOSITION PRODUCTS CO, CO2, When Combusted.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Avoid open flame or sparks.	
WASTE DISPOSAL METHOD	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type)			
VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL (General)		OTHER
PROTECTIVE GLOVES	Normally not required.		EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Avoid open flame and spark sources.	
OTHER PRECAUTIONS	