



## Safety Data Sheet MasterFlex Membrane HB 450 Resin

Version 1.0  
Date: 04/16/2015

### 1. Product and Company Identification

Product Name : MasterFlex Membrane HB 450 Resin-Part A  
Product Description : Epoxy Resin  
Chemical Family : Glycidylether  
Manufacturer/ Importer/Distributor : Master Terrazzo Technologies  
8000 Bristol Pike-Levittown, PA  
P.O. Box 226  
Bristol, PA 19007  
Telephone : 1-215-949-1474  
Fax : 1-215-949-9422  
Emergency telephone Number : Chemtel-800-255-3924  
Contract #MIS0004752

### 2. Hazards Identification

#### GHS classification

Skin irritation-Category 2  
Eye irritation-Category 2A  
Skin sensitisation-Category 1  
Acute aquatic toxicity-Category 2  
Chronic aquatic toxicity-Category 2  
Germ Cell Mutagenicity-Category 2

#### GHS label elements

##### Hazard pictograms/symbols



Signal word: **WARNING!**

#### Hazards

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray  
Wash skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
Wear eye protection/ face protection.  
Wear protective gloves.

**Response**

IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation or rash occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.  
Collect spillage.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

No data available

**3. Composition/Information on Ingredients**

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt%</u>
Modified Bis A Epoxy Resin	Proprietary	80-100

Chemical Family- Glycidylether. The remaining components are trade secret.

**4. First Aid Measures****Description of first aid measures**

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**Eye contacts:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## 5. Firefighting Measures

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as blanket for fire extinguishment.

**Unsuitable extinguishing media:** Do not use direct water stream. May spread fire.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is emitted when burned without sufficient oxygen.

**Advice for firefighters**

**Fire fighting procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediate withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire.

Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" section of this SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to

Section 8, Exposure Controls and Personal Protection. Refer to section 7, Handling, for additional precautionary measures.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/ or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Absorb with materials such as: Sand. Polypropylene fiber products. Polyethylene fiber products. Remove residual with soap and hot water. Collect in suitable and properly labeled containers. Residual can be removed with solvent. Solvents are not recommended for clean-up unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent Safety Data Sheet for handling information and exposure guidelines. See Section 13, Disposal Considerations, for additional information.

## 7. Handling and Storage

**Precautions for safe handling:** Avoid prolonged or repeated contact with skin. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid use if electric band heaters. Failures of electric band heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire. Application of a direct flame to a container of liquid epoxy resin can also cause explosion and/ or fire. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** recommended pumping and storage temperature for bulk shipments is 60°C (140°F) Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

### Storage stability

**Storage temperature:**  
2-43°C (36-109°F)

**Shelf life: Use within**  
24 Month

## 8. Exposure Controls/ Personal Protection

### Control parameters

Exposure limits are listed below, if they exist.

None established

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection: Use safety glasses (with side shield).**

#### Skin protection

**Hand protection:** Use gloves chemically resistant to the material. Examples of preferred gloves barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may

be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

## 9. Physical and Chemical Properties

<b>Appearance:</b>	Viscous Liquid
<b>Physical State:</b>	Liquid
<b>Odor:</b>	Mild
<b>Odor Threshold:</b>	No test data available
<b>pH:</b>	No test data available
<b>Melting point/range:</b>	Not applicable
<b>Freezing Point:</b>	No test data available
<b>Flash Point:</b>	>200°F (>93°C)
<b>Evaporation Rate (Butyl Acetate=1):</b>	No test data available
<b>Lower explosion limit:</b>	Not applicable
<b>Upper explosion limit:</b>	Not applicable
<b>Vapor Pressure:</b>	No data available
<b>Relative Vapor Density (air=1):</b>	No data available
<b>Water solubility:</b>	Negligible
<b>Auto-ignition temperature:</b>	Not applicable
<b>Decomposition temperature:</b>	No test data available
<b>Dynamic Viscosity:</b>	No data available
<b>Oxidizing properties:</b>	No
<b>Liquid Density:</b>	1.27 g/cm <sup>3</sup> at 25°C (77°F)

**Note:** The physical data presented above are typical values and should not be construed as a specification.

## 10. Stability and Reactivity

**Reactivity:** no data available

**Chemical stability:** Stable under recommended storage conditions. See storage, Section 7.

**Possibility of hazardous reactions:** Will not occur by itself. Masses of more than one pound (0.5kg) of product plus an aliphatic amine cause irreversible polymerization with considerable heat build-up.

**Conditions to avoid:** Avoid short term exposures to temperatures above 300°C

Potentially violent decomposition can occur above 350°C

Avoid prolonged exposure to temperatures above 250°C

Generation of gas during decomposition can cause pressure in closed system. Pressure build-up can be rapid.

**Incompatible materials:** Avoid contact with oxidizing materials. Avoid contact with: Acids. Bases. Avoid unintended contact with amines.

**Hazardous decomposition products:** decomposition products depend upon temperature, air supply and the presence of other materials. Gasses are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

## 11. Toxicological Information

### 11.1 Information on toxicological affects

#### Likely routes of exposure

Effects on Eye	: Contact with eyes may cause irritation.
Effects on Skin	: No data available.
Inhalation Effects	: May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Ingestion Effects	: No data available.
Symptoms	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Reproductive disorders (such as birth defects or sterility)., Skin disorders and Allergies., Adverse skin effects (such as rash, irritation or corrosion).

#### Acute toxicity

Acute Oral Toxicity	: LD50 : 5,800 mg/kg Species : Rat.
Inhalation	: LC50 (4 h) : 1220 ppm Species : Rat.
Acute Dermal Toxicity	: LD50 : > 2,000 mg/kg Species : Rabbit. Method : Estimated.
Skin corrosion/irritation	: Severe skin irritation.
Serious eye damage/eye irritation	: Mild eye irritation.
Sensitization.	: May cause sensitization by skin contact.

#### Chronic toxicity or effects from long term exposures

Carcinogenicity	: No data available.
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Reproductive toxicity : No data is available on the product itself.  
Germ cell mutagenicity : No data is available on the product itself.  
Specific target organ systemic toxicity (single exposure) : No data available.  
Specific target organ systemic toxicity (repeated exposure) : No data available.  
Aspiration hazard : No data available.

#### Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Reproductive toxin., Prolonged contact may result in chemical burns and permanent damage., Repeated or prolonged contact causes sensitization, asthma and eczemas. Reproductive disorders (such as birth defects or sterility)., Skin disorders and Allergies., Adverse skin effects (such as rash, irritation or corrosion).

### 12. Ecological Information

#### Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to other organisms : No data available.

#### Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

### 13. Disposal Considerations

Disposal methods: DO NOT DUMP INTO ANY SEWERS ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINES ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

### 14. Transport Information

#### DOT

Not regulated for transport

#### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Epoxy resin)
<b>UN number</b>	Un 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	Epoxy resin
<b>Transport in bulk</b>	Consult IMO regulations before transporting ocean bulk
<b>According to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	

**Classification for AIR transport (IATA/ICAO):**

<b>Proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
<b>UN Number</b>	UN 3082
<b>Class</b>	9
<b>Packaging group</b>	III

This information is not intended to convey all specific regulatory or operational requirements/information related to this product. Transportation classification may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules related to the transportation of the material.

## 15. Regulatory Information

**OSHA Hazard Communication Standard**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

Acute Health Hazard

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania Worker and Community Right-To-Know Act:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

This product contains no listed substances known to the State of California to cause cancer, birth defects at other reproductive harm, at levels which would require a warning under the statute.

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.



**16. Other Information**

## HMIS Rating

Health	: 2
Flammability	: 1
Physical hazard	: 0
Prepared by	: Master Terrazzo Technologies
Telephone	: 1-215-949-1474
	: 800-255-3924 - Chemtel
Preparation Date	: 04/16/2015