

4020 EPOXY RESIN
SAFETY DATA SHEET

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: 4020 Epoxy Resin

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Various

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Fortress Stabilization Systems
184 West 64th Street
Holland, MI 49423

Telephone Number: Toll Free: 800-207-6204 **Office:** 616-355-1421 **Fax:** 616-355-1428

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: ChemTel: 800-255-3924
Int'l: 813-248-0585

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL

Hazard class

Skin irritation 2
Serious eye irritation 2A
Skin sensitization 1

2.2 LABEL ELEMENTS Hazard Pictogram:



Signal Word: Warning

Hazard Statement: Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Prevention: Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace.

Response: If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage: Not applicable.

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Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 ADDITIONAL INFORMATION Hazards not otherwise classified: Not applicable.

19.9 % of the mixture consists of ingredient(s) of unknown acute toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	CAS No
Modified Epoxy Resin	Trade Secret

The specific chemical identity and exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

Section 4: FIRST AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. Contact with hot material can cause thermal burns.

Skin: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause an allergic skin reaction. Contact with hot material can cause thermal burns.

Inhalation: May cause respiratory irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Direct water spray.

5.2 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection(SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment: Dike area to prevent spreading. Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Scoop up material and place in a disposal container.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Avoid contact with skin and eyes. Do not swallow. Avoid breathing dust/fume/gas/mist/vapors/spray. Handle and open container with care. When using do not eat or drink. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Keep containers closed when not in use. Do not store in an area equipped with emergency water sprinklers. (See section 10)

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Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	OSHA-PEL	ACGIH-TLV
Modified Epoxy Resin	Not available.	Not available.

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

Hand Protection: Butyl gloves.

Body Protection: Wear suitable protective clothing.

Respiratory Protection: Wear suitable respiratory equipment.

General Health and Safety Measures: Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Provide eye washes in workshops where the product is constantly handled.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paste
Color:	Blue
Odor:	Not available.
Odor Threshold:	Not available
Physical State:	Paste
pH:	Not available.
Melting Point/Freezing Point:	Not available.
Initial Boiling Point and Boiling Range:	> 200 °C (> 392 °F)
Flash Point:	> 93°C (> 199 °F)
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.

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Vapor Pressure:	0.03 mbar at 77°C (171°F)
Vapor Density:	Not available.
Relative Density/Specific Gravity:	> 1.14 – 1.17
Solubility:	Negligible.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	Not applicable.
VOC content, wt. %:	0 lbs./gal or 0 g/L, less water and exempt solvents

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Incompatible materials. Moisture. Do not allow molten product to contact water or other liquids. This can cause eruptions, splatter hot material or ignite flammable material.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizers, strong lewis or mineral acid, strong mineral and organic bases, and water.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Uncontrolled exothermic reactions of epoxy resins release phenolics, carbon monoxide and water.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, skin absorption, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. Contact with hot material can cause thermal burns.

Skin: Causes skin irritation. Symptoms may include redness, dema, drying, defatting and cracking of the skin. May cause an allergic skin reaction. Contact with hot material can cause thermal burns.

Ingestion: May be harmful if swallowed.
May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory irritation

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Acute Toxicity:

Ingredient	LC50	LD50
Modified Epoxy Resin	Not available.	Not available.

Calculated overall Chemical Acute Toxicity Values

LC50 (inhalation)	LD50 (oral)	LD50 (dermal)
Not available.	> 5000 mg/kg, rat	>4000 mg/kg, rabbit

Ingredient	Chemical Listed as Carcinogen or Potential
Modified Epoxy Resin	Not available.

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM

EXPOSURE Skin Corrosion/Irritation:	Causes skin irritation.
Serious Eye Damage/Irritation:	Causes serious eye irritation.
Respiratory Sensitization:	Based on available data, the classification criteria are not met.
Skin Sensitization:	May cause an allergic skin reaction.
STOT-Single Exposure:	Based on available data, the classification criteria are not met.
Carcinogenicity:	This product is not classified as a carcinogen.
Germ Cell Mutagenicity:	This product is not classified as a mutagen.
Reproductive Toxicity:	This product does not contain known reproductive toxins.
Developmental:	This product does not contain known developmental toxins.
Fertility:	No known significant effects or critical hazards.
STOT-Repeated Exposure:	Based on available data, the classification criteria are not met.
Aspiration Hazard:	Based on available data, the classification criteria are not met.
Toxicologically Synergistic Materials:	Not available.
Other Information:	Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: May cause long-term adverse effects in the aquatic environment.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available

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Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: If this product becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility compliance with local and federal regulations.

Empty Container Disposal: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place. Dispose of empty containers in an appropriate disposal facility in

Section 14: TRANSPORT INFORMATION

14.1 UN NUMBER

Not regulated.

14.2 UN PROPER SHIPPING NAME

Not applicable.

14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable.

14.4 PACKING GROUP

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not available.

14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not available.

14.7 SPECIAL PRECAUTIONS FOR USER

Do not handle until all safety precautions have been read and understood.

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE CHEMICAL

MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Modified Epoxy Resin	Not available.	Not available.	Not available.	Not available.

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State Regulations

California Proposition 65:

This product may contain trace amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	USA TSCA
Modified Epoxy Resin	Not available.

NFPA - National Fire Protection Association:	
Health:	2
Fire:	1
Reactivity:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

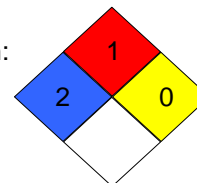
- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

HMIS Classification:

Health	2
Flammability	1
Reactivity	0

NFPA Classification:



HMIS and NFPA ratings are not required under 29 CFR 1910.1200 but are provided by E-Bond Epoxies, Inc. as a customer service.

Disclaimer: The information on this Safety Data Sheet represents our current data and best opinion as to the proper use and handling of the product identified and described on this document under normal conditions. They are given without warranty or guarantee of any kind. Any use of the product which is not in conformance With this data sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user. The user must read and follow instructions on this Safety Data Sheet, the Product Data Sheet and Product Labels prior to use of the product.

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