

Section 1 Identification

Product identifiers

Fre-Weld 5060 Blue Hi-Temp Epoxy Board Adhesive Part A (Resin)

Relevant identified uses of the substance or mixture and uses advised against

High temperature epoxy adhesive resin. For professional/industrial use only.

Details of the supplier of the safety data sheet

Freeman Manufacturing & Supply Company
1101 Moore Road, Avon, OH 44011-4043 US
Telephone: +1 (440) 934-1902
Email: contactus@freemansupply.com

24-Hour emergency number:
CHEMTREC (800) 424-9300

Section 2 Hazards Identification

Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Skin Irritant, Category 2
Skin Sensitizer, Category 1
Eye Irritant, Category 2A
Aquatic Chronic, Category 2

Label elements



Warning

Hazard Statements

H302 Harmful if swallowed.
H315 May be harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves/protective clothing/ eye protection/ face protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P302+P352 IF ON SKIN: Wash with plenty of water.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes;
Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention
P501 Dispose of contents/container in accordance to Federal rules, laws and regulations.

Fre-Weld 5060 Part A (Resin)

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Diglycidyl-Ether of Bisphenol-A	25068-38-6	10-30
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin	9003-36-5	10-30
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	10-30

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is labored, administer oxygen.

If not breathing administer artificial respiration. Consult a physician.

Skin Contact: Wash off in flowing water or shower with soap and rinse thoroughly.

Remove contaminated clothing and discard. If irritation persists, consult a physician.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. Consult a physician. Do not use eye ointment.

Ingestion: If swallowed, seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person.

Section 5 Fire-Fighting Measures

Extinguishing media

Foam, carbon dioxide, dry chemical, water spray. DO NOT use a direct water stream.

Hazardous thermal decomposition products

The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide, and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances and appropriate precautions should be taken. May liberate carbon monoxide or carbon dioxide.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Collect contaminated fire extinguishing water separately. Do not discharge into drains.

Dispose of in accordance with local regulations.

Conditions of flammability

Combustible

Section 6 Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment. For personal protection see section 8.

Environmental precautions

Do not let product enter drains, dike if needed. If product contaminates rivers and lakes or drains consult respective authorities.

Methods and materials for containment and cleaning up

Avoid contact with material. Evacuate all non-essential personnel. Keep spark producing equipment away.

Dike area to prevent spill spreading and soak up with absorbent material such as sand or polypropylene/polyethylene fiber products and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. Solvents are not recommended for cleanup unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed.

Consult appropriate solvent SDS for handling information and exposure guidelines. Dispose of absorbent materials in accordance with regulations.

Fre-Weld 5060 Part A (Resin)

Section 7 Handling and Storage

Precautions for safe handling

Maintain emergency eye wash stations and showers near working area. Practice good caution and personal cleanliness to avoid skin, eye contact, and direct inhalation. Recommended pumping and storage temperature is 59-77°F (15-25°C).

Conditions for safe storage, including any incompatibilities

Keep containers tightly sealed when not in use. Store away from heat, ignition sources, and store away from incompatible materials. Store in a cool, dry, and well-ventilated area.

Section 8 Exposure Controls/Personal Protection

Exposure limits

Not available.

Appropriate engineering controls

Good general ventilation is sufficient for most conditions. Airborne concentrations should be kept to lowest levels possible. Avoid breathing mists. If general ventilation or local exhaust is inadequate; persons exposed to mists, vapors, or dusts should wear appropriate NIOSH/MSHA approved breathing devices.

Personal protective equipment

Eye/face protection: Safety glasses with side shields. Splash proof goggles.

Skin/body protection: Use protective clothing impervious to this product. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation.

Respiratory protection: No respiratory protection should be needed at room temperature. Avoid breathing vapors of heated material. NOTE: If grinding or sanding cured material use NIOSH or OSHA approved respiratory protection.

Safety stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General hygienic practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking, or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Physical state	Liquid
Odor and appearance	Faint epoxy odor
Odor threshold	No data available
Boiling point	>392°F (>200°C)
Flash point (closed cup)	>302°F (>150°C)
Evaporation rate	No data available
Vapor pressure (Pa)	13.3
Vapor density (Air = 1)	Not available
Specific gravity (g/cm³)	0.95

Section 10 Stability and Reactivity

Chemical stability

Stable under recommended storage conditions.

Section 10 Stability and Reactivity

Conditions to avoid

Excess heating above 140°F (60°C) over long periods of time degrades the resin. Hazardous polymerization will not occur by itself, but masses of more than 1 lb. of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.

Incompatible materials

Bases, acids, amines, and oxidizing materials, plastics other than Teflon or polypropylene, and aluminum at high temperatures. Sodium or Calcium Hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

Explosion Hazards

Extinguish all nearby sources of ignition since vapors decompose to toxic products at high temperatures. When exposed to heat, closed containers may explode. Contact with strong oxidizers may cause fire or explosion.

Section 11 Toxicological Information

Route of entry

Eye contact: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

Skin contact: Prolonged skin contact is unlikely to result in absorption of harmful amounts

Inhalation: Not available.

Ingestion: Not available.

Acute Toxicity Estimates (ATE)

Very low toxicity if swallowed. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Vapor from heated material, mist, or aerosol may cause respiratory irritation.

Toxicity Data

Ingredient Name	Oral LD50 (rats)	Dermal LD50 (rabbits)
Diglycidyl-Ether of Bisphenol-A	30,000 mg/kg	>1,200 mg/kg
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin	>2,000 mg/kg Estimated*	Not determined
Phenol, polymer with formaldehyde, glycidyl ether	19,200 mg/kg	>4,500 mg/kg

Potential acute and chronic health effects

Skin Corrosion/Irritation: Prolonged or repeated contact may cause skin irritation with local redness.

Respiratory Sensitization: Not available

Skin Sensitization: Repeated exposure may cause skin sensitization

Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA and ACGIH

Germ Cell Mutagenicity: Animal mutagenicity studies were negative.

In vitro mutagenicity studies were negative in some cases and positive in others.

Reproductive Toxicity: No reproductive effects.

Aspiration Toxicity: Not likely to present a hazard.

Section 12 Ecological Information

Persistence and degradability	Material not readily biodegradable
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT & vPvB assessment	No data available

Safety Data Sheet
Fre-Weld 5060 Part A (Resin)

Section 13 Disposal Considerations

Any disposal practice must be in accordance with Municipal, Provincial and Federal regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate, or otherwise inappropriate. Do not allow into any sewers, on the ground or into any body of water. Dispose of any unused, uncontaminated, as well as contaminated product, by a properly licensed company.

Section 14 Transport Information

DOT-TDG: This product is not regulated for transport when shipped domestically by land.

IMO-IMDG (Sea transport)

UN Number: UN 3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)

Hazard Class: 9

Packing Group: III

Marine pollutant: Yes, epoxy resin

Transportation in bulk: Consult IMO regulations before transporting ocean bulk according to Annex I or II of Marpol 73/78 and the IBC or IGC Code.

IATA-ICAO (Air transport)

UN Number: UN 3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)

Hazard Class: 9

Packing Group: III

Marine pollutant: No

Section 15 Regulatory Information

TSCA: All ingredients are on the TSCA Chemical Substance Inventory, or are not required to be listed.

DSL: The substance(s) in this product is/are on the Canadian Domestic Substances List.

WHMIS: D28

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use.

Date of initial release: October 29, 2024

Date of previous revision: N/A

Current revision date: October 29, 2024

Fre-Weld 5060 Part B (Hardener)

Section 1 Identification

Product identifiers

Fre-Weld 5060 Blue Hi-Temp Epoxy Board Adhesive Part B (Hardener)

Relevant identified uses of the substance or mixture and uses advised against

High temperature epoxy adhesive hardener. For professional/industrial use only.

Details of the supplier of the safety data sheet

Freeman Manufacturing & Supply Company
1101 Moore Road, Avon, OH 44011-4043 US
Telephone: +1 (440) 934-1902
Email: contactus@freemansupply.com

24-Hour emergency number:
CHEMTREC (800) 424-9300

Section 2 Hazards Identification

Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Acute Toxicity, Dermal, Category 4
Acute Toxicity, Oral, Category 4
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/Eye Irritation, Category 1
Skin Sensitization, Category 1
Acute Aquatic Toxicity, Category 2

Label elements



Danger

Hazard Statements

H302+H312 Harmful if swallowed or in contact with skin
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H318 Causes serious eye damage
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves/protective clothing/ eye protection/ face protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P312 Call a POISON CENTER or Doctor/Physician if you feel unwell
P303+P361+P353 IF ON SKIN: Take off immediately all contaminated clothing.
Rinse skin with water/shower
P333+P313 If skin irritation or rash occurs: get medical advice/attention as appropriate
P363 Wash contaminated clothing before reuse
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 Immediately call a POISON CENTER or Doctor/Physician

Fre-Weld 5060 Part B (Hardener)

Section 2 Hazards Identification

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes;
 Remove contact lenses, if present and easy to do. Continue rinsing
 P310 Immediately call a POISON CENTER or Doctor/Physician
 P405 Store locked up
 P501 Dispose of contents/container in accordance to Federal rules, laws and regulations.

Section 3 Composition/Information on Ingredients

Ingredient Name	CAS Number	Concentration (%)
Isophorone diamine	2855-13-2	30-60
Polymer of c-18 unsat'd fatty acid dimers w/ teta & tofa	68082-29-1	15-40
3,6,9-triazaundecamethylenediamine	112-57-2	15-40

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is labored, administer oxygen. If not breathing administer artificial respiration. Consult a physician.
Skin Contact: Wash off in flowing water or shower with soap and rinse thoroughly. Remove contaminated clothing and discard. If irritation persists, consult a physician.
Eye Contact: Flush eyes with plenty of water for at least 15 minutes while holding eyelids apart. Consult a physician. Do not use eye ointment.
Ingestion: If swallowed, seek medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel. Do not give anything by mouth to an unconscious person.

Section 5 Fire-Fighting Measures

Extinguishing media

Water spray, carbon dioxide, dry chemical, foam to extinguish flames.
 Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

Hazardous thermal decomposition products

During a fire, oxides of nitrogen may be evolved. Burning can produce carbon monoxide and/or carbon dioxide.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.
 Collect contaminated fire extinguishing water separately. Do not discharge into drains.
 Dispose of in accordance with local regulations.

Conditions of flammability

Non-flammable

Section 6 Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear appropriate protective equipment. For personal protection see section 8.

Environmental precautions

Do not let product enter drains, dike if needed. If product contaminates rivers and lakes or drains consult respective authorities.

Fre-Weld 5060 Part B (Hardener)

Section 6 Accidental Release Measures

Methods and materials for containment and cleaning up

Avoid contact with material and vapors. Evacuate all non-essential personnel. Keep spark producing equipment away. Dike area to prevent spill spreading and soak up with absorbent material such as sand or polypropylene/polyethylene fiber products and collect in suitable containers. Residual resin may be removed using steam or hot soapy water. Solvents are not recommended for cleanup unless the recommended exposure guidelines and safe handling practices for the specific solvent are followed. Consult appropriate solvent SDS for handling information and exposure guidelines. Dispose of absorbent materials in accordance with regulations.

Section 7 Handling and Storage

Precautions for safe handling

Maintain emergency eye wash stations and showers near working area. Practice good caution and personal cleanliness to avoid skin, eye contact, and direct inhalation.

Conditions for safe storage, including any incompatibilities

Keep containers tightly sealed when not in use. Store away from heat, ignition sources, and store away from incompatible materials. Store in a cool, dry, and well-ventilated area.

Section 8 Exposure Controls/Personal Protection

Exposure limits

Not available.

Appropriate engineering controls

Good general ventilation is sufficient for most conditions. Airborne concentrations should be kept to lowest levels possible. Avoid breathing mists. If general ventilation or local exhaust is inadequate; persons exposed to mists, vapors, or dusts should wear appropriate NIOSH/MSHA approved breathing devices.

Personal protective equipment

Eye/face protection: Safety glasses with side shields. Splash proof goggles.

Skin/body protection: Use protective clothing impervious to this product. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation.

Respiratory protection: No respiratory protection should be needed at room temperature. Avoid breathing vapors of heated material. NOTE: If grinding or sanding cured material use NIOSH or OSHA approved respiratory protection.

Safety stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General hygienic practices

Avoid breathing vapor or mist. Avoid contamination of food, beverages, or smoking materials. Wash thoroughly after handling, and before eating, drinking, or smoking. Remove contaminated clothing promptly and clean thoroughly before reuse.

Section 9 Physical and Chemical Properties

Physical state	Liquid
Odor and appearance	Ammonia-like odor
Odor threshold	No data available
pH	11.7

Fre-Weld 5060 Part B (Hardener)

Section 9 Physical and Chemical Properties

Boiling point	429°F (220.6°C)
Flash point (PMCC)	230°F (110°C)
Evaporation rate	No data available
Vapor pressure (Pa)	Not available
Vapor density (Air = 1)	>1
Specific gravity (g/cm³)	0.95
Coefficient of water/oil distribution	Not available
Solubility in water (%)	>10

Section 10 Stability and Reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Avoid heating up the product. Hazardous polymerization will not occur by itself, but masses of more than 1 lb. of epoxy resin combined with this product will cause irreversible polymerization with considerable heat buildup.

Incompatible materials

Bases, acids, amines, and oxidizing materials, plastics other than Teflon or polypropylene, and aluminum at high temperatures. Sodium or Calcium Hypochlorite. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion.

Explosion Hazards

Extinguish all nearby sources of ignition since vapors decompose to toxic products at high temperatures. When exposed to heat, closed containers may explode. Contact with strong oxidizers may cause fire or explosion.

Section 11 Toxicological Information

Route of entry

Eye contact: Causes irritation, experienced as pain, with excess blinking and tear production, and seen as extreme redness and swelling of the eye and chemical burns of the eye. Severe eye damage may cause blindness.

Skin contact: Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material. Causes severe irritation with pain, severe excess redness and swelling with chemical burns, blister formation, and possible tissue destruction.

Inhalation: Vapor is irritating and may cause excessive tear formation, burning sensation of the nose and throat, coughing, wheezing, shortness of breath, nausea, and vomiting. Extremely high vapor concentrations may cause lung damage. Some individuals may develop asthma.

Ingestion: Causes burning of mouth, throat, and stomach with abdominal and chest pain, nausea, vomiting, diarrhea, thirst, weakness, and collapse. Repeated oral exposures may cause kidney and liver changes. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Acute Toxicity Estimates (ATE)

No data available

Toxicity Data

Ingredient Name	Oral LD50 (rats)	Dermal LD50 (rabbits)
Isophorone diamine	1,030 mg/kg	>2,000 mg/kg
Polymer of c-18 unsat'd fatty acid dimers w/ teta & tofa	>2,000 mg/kg Estimated	>2,000 mg/kg Estimated
3,6,9-triazaundecamethylenediamine	>3,250 mg/kg	1,260 mg/kg

Fre-Weld 5060 Part B (Hardener)

Section 11 Toxicological Information

Potential acute and chronic health effects

Skin Corrosion/Irritation: Repeated skin contact may cause persistent irritation or dermatitis.
Respiratory Irritation/Sensitization: Repeated inhalation may cause lung damage. Overexposure to vapor, dust or mist may aggravate existing respiratory conditions, such as asthma, bronchitis, and inflammatory or fibrotic respiratory disease.
Skin Sensitization: Skin contact may cause sensitization and an allergic skin reaction and may aggravate an existing dermatitis. Cross-sensitization may occur by skin contact with this material and other amines.
Carcinogenicity: Not available
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available
Aspiration Toxicity: May occur during swallowing or vomiting, resulting in lung damage.

Section 12 Ecological Information

Persistence and degradability	Material not readily biodegradable
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT & vPvB assessment	No data available

Section 13 Disposal Considerations

Any disposal practice must be in accordance with Municipal, Provincial and Federal regulations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate, or otherwise inappropriate. Do not allow into any sewers, on the ground or into any body of water. Dispose of any unused, uncontaminated, as well as contaminated product, by a properly licensed company.

Section 14 Transport Information

DOT-TDG
UN Number: UN 1760
Proper shipping name: CORROSIVE LIQUID, N.O.S. (AMINE)
Hazard Class: 8
Packing Group: III
Marine pollutant: Yes

Section 15 Regulatory Information

TSCA: All ingredients are on the TSCA Chemical Substance Inventory, or are not required to be listed.
DSL: The substance(s) in this product is/are on the Canadian Domestic Substances List.
WHMIS: D1B, D2B, E

Section 16 Other Information

NFPA
 Health: 3, Flammability: 1, Reactivity: 0

Section 16 Other Information

Disclaimer

The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use.

Date of initial release: October 29, 2024
Date of previous revision: N/A
Current revision date: October 29, 2024