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Material Safety Data Sheet

FMJ-5100

1. PRODUCT IDENTIFICATION

Trade Name: FMJ-5100 Machinable Grade Metal Repair

Chemical Family: Two Component epoxy amine system

Intended Use or Product Type: Epoxy Compound for Metal Repair

2. HAZARDS IDENTIFICATION

Hazard Classification: Skin Irritant-Category 2

Signal Word: Warning

Hazard Statement(s): H317 Prolonged exposure may cause an allergic skin reaction

Pictogram:



Precautionary Statements: P101: If medical advice is needed, have product container or label at hand

P102: Keep out of reach of children

P103: Read label before use

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear Protective gloves/protective clothing/eye and face protection

P333+P313: If skin irritation/rash occurs, get medical attention

P501: Dispose of contents/container in accordance with local/regional/national and intl regulations

NFPA Rating:



Health: 1
Flammability: 1
Instability: 0
Specific Hazard: N/A

HIMS ® Rating:



Health: 1
Flammability: 1
Physical Hazard: 0
Personal Protection Index: C

3. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA Hazardous Ingredients: NA

Resin:	Novolac Resin: CAS# 28064-14-4, 20-30%
	OSHA (PEL/STEL) NE
	ACGIH (TWA/STEL) NE
	Polymer of Bisphenol A and Epichlorohydrin: CAS# 025085-99-8, 5-15%
	OSHA (PEL/STEL) NE
	ACGIH (TWA/STEL) NE
	Resorcinol Diglycidyl Ether: CAS #101-90-6, <5%
	OSHA (PEL/STEL) NE
	ACGIH (TWA/STEL) NE
Hardener:	Phenol: CAS# 108-95-2, 5-15%
	ACGIH/OSHA (TWA) 5.00ppm, 19.00 mg/m ³
	ACGIH/OSHA (STEL) NE
	Triethylenetetramine: CAS# 112-24-3, 10-15%
	OSHA (PEL/STEL) NE
	ACGIH (TWA/STEL) NE
	Aliphatic Amine: CAS# Trade Secret, 50-70%
	OSHA (PEL/STEL) NE
	ACGIH (TWA/STEL) NE

4. FIRST AID MEASURES

Ingestion:	<u>Resin</u> - No hazards anticipated from swallowing small amounts incidental to normal handling operations. Single dose oral toxicity is considered to be extremely low. If large amounts are ingested, induce vomiting if conscious. <u>Hardener</u> - Call physician immediately. Give generous amounts of water if conscious, but do not induce vomiting. If vomiting occurs, give fluids again.
Skin:	<u>Resin</u> - Has caused allergic skin reactions. Repeated exposure may cause skin irritation. A single exposure is not likely to result in the material being absorbed through skin in harmful amounts. For skin contact, wash affected areas thoroughly with large amounts of water and soap. <u>Hardener</u> - For skin contact, immediately remove contaminated clothing and shoes and wash affected areas thoroughly with large amounts of water and soap.
Inhalation:	<u>Resin</u> - At temperatures, vapors are minimal due to physical properties. Remove to fresh air if effects occur, consult a physician. <u>Hardener</u> - If inhaled, remove from area to fresh air. If not breathing, give artificial respirator. Get immediate medical attention.
Eyes:	<u>Resin</u> - May cause slight eye irritation. Corneal injury is unlikely. Flush eyes with plenty of water, if effects occur. <u>Hardener</u> - Immediately flush eyes with water for 15 minutes with running water. Call physician.

Overexposure Effects: Overexposure to this material can cause chemical burns to the skin and eyes and inhalation of vapors can cause severe respiratory irritation. Can cause allergic skin and respiratory reactions. Can have effects on the nervous system evidenced by central nervous system depression, tremors, paralysis, diarrhea and vasodilation. May also cause headache, nausea and dizziness.

Medical Conditions Aggravated by Exposure: Allergy, eczema or skin conditions.

Additional Information: Promptly remove wet contaminated non-impervious clothing, wash before reuse. Destroy contaminated leather and absorbent shoes.

5. FIRE FIGHTING MEASURES

Flash Point:	<u>Resin</u>	<u>Hardener</u>
	>351°F (171°C)	>212°F (100°C)
Flash Point Method Used:	Closed cup	
Fire Fighting Extinguishing Media:	Carbon Dioxide, foam, dry chemical	
Fire Fighting Equipment:	Use a self-contained breathing apparatus	
Fire and Explosion Hazards:	Decomposition and combustion products may be toxic.	
NOTE:	decomposition and combustion products may be toxic	

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Steps to be taken if material is spilled:

Keep unnecessary people away. Isolate hazard area and deny unnecessary entry. Eliminate all sources of ignition in vicinity of spill. For small spills: absorb with materials such as sand, polyethylene fiber, or polypropylene fiber products. Place in properly labeled dry sealable containers. Remove residual using hot soapy water. For large spills: Dike and pump into suitable and properly labeled containers and dispose of in professional manner.

7. HANDLING AND STORAGE

Precautions: Do not get in eyes, on skin, on clothing. Do not breathe vapor, mist or spray. Use only with adequate ventilation. Individuals should wash thoroughly after handling. For industrial use only.

Storage Information: Keep away from heat, sparks and open flame. Ground and bond metal containers for liquid transfer to avoid static sparks. Store at temperatures between 2°C and 60°C in tightly closed containers in dry area to prevent moisture and carbon dioxide contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment:	Wear protective equipment to prevent exposure and personal contact.
Skin Protection:	Impervious gloves
Respiratory Protection:	Organic chemical cartridge respirator if needed in non-vented area
Eye Protection:	Splash-proof chemical goggles
Engineering Controls:	Good general mechanical ventilation and local exhaust

HMIS ratings Health: 1
 Flammability: 1
 Physical Hazard: 0

NFPA ratings Health: 1
 Flammability: 1
 Instability: 0

9. PHYSICAL AND CHEMICAL PROPERTIES

	<u>Resin</u>	<u>Hardener</u>
Appearance (Color):	Dark Gray	Light Brown
Odor:	Slight Aromatic	Fishy Odor
Physical State:	Compound	Compound
Solubility in Water (% by weight):	Negligible	Negligible
Density:	2.15	1.05
pH:	ca 5	ca 10

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong oxidizers, strong acids and bases

Hazardous Decomposition Products:

Resin - Carbon Monoxide, Carbon Dioxide, Phenolics

Hardener - Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Nitric Acid in fire, Aldehydes and Ammonia when heated.

Hazardous Polymerization:

Resin - will not occur

Hardener - will not occur

11. TOXICOLOGICAL INFORMATION

Acute Oral Effects (Ingestion):

Resin - LD₅₀ (rats): >5000 mg/kg

Hardener - LD₅₀ (rats): 2200 mg/kg

Sensitization: Can cause skin and respiratory sensitization

Skin Irritation:

Resin - LD₅₀ (rabbits): >2000 mg/kg

Hardener - LD₅₀ (rabbits): No data

Eye Irritation: Irritant

Inhalation: LD₅₀ (rats): >10.00 mg/l/1 hr.

12. ECOLOGICAL INFORMATION

Additional Information: Amines, in general, may be toxic to aquatic organisms. Epoxies are only slightly soluble in water.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated

15. REGULATORY INFORMATION**US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is not considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

EPA SARA Title III: Section 304 - CERCLA: Not listed.

EPA SARA Title III: Section 312 (40CFR370) hazard class: Immediate Health Hazard. Delayed Health Hazard.

EPA SARA Title III: Section 313 Toxic Chemical List (TCL): This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Sec. 313 (40 CFR 372).

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific features and shall not establish a legally valid contractual relationship.

HMIS ratings Health: 1
 Flammability: 1
 Physical Hazard: 0

NFPA ratings Health: 1
 Flammability: 1
 Instability: 0