

EPOXY 091108-1M1

ADHESIVE SYSTEM

TECHNICAL DATA

Product Description

Epoxy 091108-1M1 is a medium viscosity epoxy resin system designed for industrial adhesive, small potting and laminating applications. This two part adhesive is easily mixed and develops tough, strong bonds to a wide variety of plastics, metals, and glass ceramics. Epoxy 091108-1M1 is a very effective electrical insulator which also provides very good resistance to water, petroleum solvents, mild acids and alkalis.

APPLICATIONS

- Industrial adhesion
- Small potting
- Laminating

FEATURES

- Convenient two part mix ratio
- Moisture and chemically resistant
- Room temperature cure
- Petroleum solvent resistant
- Electrically insulating

RECOMMENDED SUBSTRATES

- Glass
- Metal
- Plastic

UNCURED PROPERTIES*		
Property	Value	Test Method
Solvent Content	No Nonreactive Solvents	N/A
Chemical Class, PT A:B	Epoxy : Amine	N/A
Color, PT A:B	Yellow : Blue	N/A
Color, Mixed	Green	N/A
Specific Gravity, PT A	1.19	TFTEST002
Specific Gravity, PT B	1.00	TFTEST002
Viscosity @25C, cps, PT A	30,000-150,000	TFTEST001
Viscosity @25C, cps, PT B	50,000-150,000	TFTEST001

CURED MECHANICAL PROPERTIES*		
Property	Value	Test Method
Durometer Hardness, Shore D	69	TFTEST012
Moisture Resistance	Excellent	N/A
Operating Temperature, C	-75 to 145	N/A
Elongation, %	10	N/A

CURE OVERVIEW*		
Property	Value	Test Method
Mix Ratio by Weight, Resin:Hardener	2:1	N/A
Pot Life @ room temperature, min	120	N/A
Cure Time @ room temperature, hr	24-48	N/A

Storage:

Store material in cool, dry location at a temperature between 10°C to 28°C. Keep from freezing. Refer to packaging specific quote for shelf life information. Consult MSDS for safe handling recommendations.

Revision Number: 3 Date: 21 November, 2013

Resin Designs, LLC 11 State Street Woburn, MA 01801 www.resindesigns.com P 781-935-3133 F 781-935-3144

Resin Designs, LLC makes no express or implied warranties or merchantability, fitness or otherwise with respect to this product. In addition, while the information contained herein is believed to be reliable, no warranty is express or implied regarding the accuracy of the results to be obtained from the use thereof. The properties given are typical values and are not intended for use in preparing specifications. User should make their own test to determine the suitability of this product for their own purposes.



11 State Street
Woburn, MA 01801
(781) 935-3133

1. MATERIAL IDENTIFICATION

Product Name: **EPOXY 091108-1M1 Part A**

2. COMPOSITION

HAZARDOUS COMPONENTS	CAS NO.	PERCENT	Exposure Limits	
			ACGIH TLV-TWA	OSHA PEL
Epoxy Resin	25068-38-6	>80	N.E.	N.E.

Abbreviations: N.E. = Not Established

3. HEALTH HAZARDS IDENTIFICATION

Routes of Exposure: Eyes: Yes Skin: Yes Inhalation: No

Eye Contact: May cause irritation. May cause thermal burns at elevated temperatures.

Skin Contact: May cause irritation and sensitization. May cause thermal burns at elevated temperatures.

Inhalation: Effects are not known.

Ingestion: Effects are not known.

4. FIRST AID MEASURES

Eyes: Flush eyes thoroughly with water for at least 15 minutes while holding eyelids open. Seek medical attention.

Skin: Remove contaminated clothing and wipe from skin. Flush the affected area with water. Follow by washing with soap and water. Wash contaminated clothing thoroughly before reuse. If irritation persists, obtain medical attention.

Inhalation: Remove to fresh air, and provide oxygen or artificial respiration if needed. Obtain medical attention.

Ingestion: Do not induce vomiting. Obtain medical attention.

5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

Flashpoint:	>200F
Explosive Limits:	Not determined
Auto - Ignition Temperature:	Not determined
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, aldehydes, acids, and other organic substances

Fire Fighting Instructions: Firefighters should be equipped with full bunker gear, including a positive pressure, NIOSH approved, self-contained breathing apparatus. Fire-exposed containers may be cooled with water.

Extinguishing Media: Use water fog, carbon dioxide, dry chemical, or an appropriate foam.

6. ACCIDENTAL RELEASE MEASURES

Ventilate the spill area, and evacuate if necessary. Absorb with clay, sand, or another suitable material, and dispose of properly. Clean-up personnel should use adequate protective equipment, including respiratory protection.

7. HANDLING AND STORAGE

Store in a cool, dry place away from ignition sources and temperatures above 300 °F. Avoid contact with incompatible materials. Some curing agents, if present in sufficiently large quantities, can cause exothermic reactions and runaway polymerization, yielding fumes, which vary widely in composition and toxicity. Do not breathe fumes.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering/Ventilation Controls: General ventilation and local exhaust may be required to maintain airborne concentrations below the established exposure limits exposure when generating vapors or mists.

Respiratory Protection: When local ventilation is unavailable and airborne limits are exceeded, a NIOSH-approved respirator, a supplied-air respirator, or a self-contained breathing apparatus is required.

Skin Protection: Impervious gloves and protective clothing should be worn as necessary.

Eye Protection: Chemical splash goggles or safety glasses with side shields should be worn as appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow
Boiling Point:	>500 °F
Vapor Pressure (mmHg):	0.03 at 77 °C
Vapor Density (air=1):	Not determined
Evaporation Rate:	Not determined
Solubility in Water:	Negligible

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions and use.
Conditions and Materials to Avoid:	Keep away from ignition sources and temperatures above 300 °F. Reacts with strong oxidizing agents, acids, and strong bases.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, aldehydes, acids, and other organic substances.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

This section provides toxicological information with regard to the pure form of the components indicated. This information can be subject to misinterpretation. It is therefore suggested that persons trained in its evaluation interpret this information.

Epoxy Resin:

LD ₅₀ Acute Oral Rat:	11.4 g/kg
LD ₅₀ Acute Dermal Rabbit:	> 20 ml/kg
Eye Irritation:	Driaze – 2 Rabbit
Skin Irritation:	Driaze – 1.6 Rabbit

Note: Due to this product's physical composition, the release or generation of dust is not expected to occur under normal conditions of use.

12. ECOLOGICAL INFORMATION

No data found.

13. DISPOSAL CONSIDERATIONS

Keep out of surface waters, sewers, and waterways entering or leading to surface waters. Notify authorities if any exposure to the environment occurs or is likely to occur. Utilize an appropriate disposal facility, in compliance with applicable federal, state, and local environmental control regulations.

14. TRANSPORT INFORMATION

D.O.T. Classification: Not Regulated

Hazard Class: None **UN #:** None **PG:** None **ERG #:** None **Hazard Labels:** None

I.A.T.A. Classification: Not Regulated

Hazard Class: None **UN #:** None **PG:** None **ERG #:** None **Hazard Labels:** None

15. REGULATORY INFORMATION**U.S. FEDERAL REGULATIONS****TSCA:**

The chemical components of this product are contained on section 8(B) of the chemical substance inventory list (40CFR710).

SARA Title III Information**Section 313 - Toxic Chemicals:**

Pursuant to section 313 of SARA Title III, this product does not contain a toxic chemical in a concentration in excess of 1 percent of the mixture, or 0.1 percent if a carcinogen.

Section 311 / 312 - Hazard Categories

Pursuant to section 311/312 of SARA title III, the physical and health hazard categories for this product are identified as follows:

Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No
Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	No

STATE REGULATIONS / RIGHT TO KNOW

California Proposition 65: This product contains a chemical or chemicals known to the State of California to cause cancer and/or other reproductive toxicity. Phenyl Glycidyl Ether <6 PPM

16. OTHER INFORMATION

HMIS Hazards:	Health: 2	Flammability: 1	Reactivity: 0
NFPA Hazards:	Health: 2	Flammability: 1	Reactivity: 0

This information is intended solely for the use of individuals trained in the use of this particular system.

Resin Designs LLC urges each customer or recipient of this MSDS to study it carefully in order to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals that are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate in order to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1 - notify its employees, agents, contractors, and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety. 2 - furnish this same information to each of its customers for the product. 3 - request its customers to notify their employees, customers, and other users of the product of this information.

The information contained herein is based on the data available to us and is believed to be correct. However, Resin Designs LLC makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Resin Designs LLC assumes no responsibility for injury from the use of the product described herein.



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Woburn, MA 01801
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1. MATERIAL IDENTIFICATION

Product Name: **Epoxy 091108-1M1 Part B**

2. COMPOSITION

HAZARDOUS COMPONENTS	CAS NO.	PERCENT	Exposure Limits	
			ACGIH TLV-TWA	OSHA PEL
Fatty Acid Polyamides	68410-23-1	>40	N.E.	N.E.
Amino ether		<10	N.E.	N.E.

Abbreviations: N.E. = Not Established

3. HEALTH HAZARDS IDENTIFICATION

Routes of Exposure: Eyes: Yes Skin: Yes Inhalation: No

Eye Contact: May cause severe irritation including blindness.

Skin Contact: May cause irritation and sensitization and tissue damage.

Inhalation: May be corrosive to upper respiratory tract.

Ingestion: May cause severe and permanent damage to mouth, throat and stomach.

4. FIRST AID MEASURES

Eyes: Flush eyes thoroughly with water for at least 15 minutes while holding eyelids open. Seek medical attention.

Skin: Remove contaminated clothing and wipe from skin. Flush the affected area with water. Follow by washing with soap and water. Wash contaminated clothing thoroughly before reuse. If irritation persists, obtain medical attention.

Inhalation: Remove to fresh air, and provide oxygen or artificial respiration if needed. Obtain medical attention.

Ingestion: Do not induce vomiting. Give two glasses of water unless the victim is drowsy, convulsing, or unconscious. If vomiting occurs, give fluids again. Obtain medical attention.

5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

Flashpoint:	>200F
Explosive Limits:	Not determined
Auto - Ignition Temperature:	Not determined
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, aldehydes, acids, and other organic substances

Fire Fighting Instructions: Firefighters should be equipped with full bunker gear, including a positive pressure, NIOSH approved, self-contained breathing apparatus. Fire-exposed containers may be cooled with water.

Extinguishing Media: Use water fog, carbon dioxide, dry chemical, or an appropriate foam. Use water spray to cool fire exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Ventilate the spill area, and evacuate if necessary. Absorb with clay, sand, or another suitable material, and dispose of properly. Clean-up personnel should use adequate protective equipment, including respiratory protection.

7. HANDLING AND STORAGE

Store in a cool, dry place away from ignition sources and temperatures above 300 °F. Avoid contact with incompatible materials. Some applications of this curing agent, if present in sufficiently large quantities, can cause exothermic reactions and runaway polymerization, yielding fumes, which vary widely in composition and toxicity. Do not breathe fumes.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering/Ventilation Controls: General ventilation and local exhaust may be required to maintain airborne concentrations below the established exposure limits exposure when generating vapors or mists.

Respiratory Protection: When local ventilation is unavailable and airborne limits are exceeded, a NIOSH-approved respirator, a supplied-air respirator, or a self-contained breathing apparatus is required.

Skin Protection: Impervious gloves and protective clothing should be worn as necessary.

Eye Protection: Chemical splash goggles or safety glasses with side shields should be worn as appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue Liquid
Boiling Point:	>430 F
Vapor Pressure (mmHg):	Not determined
Vapor Density (air=1):	>1
Evaporation Rate:	Not determined
Solubility in Water:	>90%

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions and use.
Conditions and Materials to Avoid:	Keep away from ignition sources and temperatures above 300 °F. Reacts with strong oxidizing agents, acids, and strong bases.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, aldehydes, acids, and other organic substances.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

No toxicological testing available for this product..

12. ECOLOGICAL INFORMATION

No data found.

13. DISPOSAL CONSIDERATIONS

Keep out of surface waters, sewers, and waterways entering or leading to surface waters. Notify authorities if any exposure to the environment occurs or is likely to occur. Utilize an appropriate disposal facility, in compliance with applicable federal, state, and local environmental control regulations.

14. TRANSPORT INFORMATION

D.O.T. Classification: Not Regulated				
Hazard Class: None	UN #: None	PG: None	ERG #: None	Hazard Labels: None
I.A.T.A. Classification: Not Regulated				
Hazard Class: None	UN #: None	PG: None	ERG #: None	Hazard Labels: None

15. REGULATORY INFORMATION**U.S. FEDERAL REGULATIONS****TSCA:**

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Section 311 / 312 - Hazard Categories

Pursuant to section 311/312 of SARA title III, the physical and health hazard categories for this product are identified as follows:

Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No
Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	No

STATE REGULATIONS / RIGHT TO KNOW

California Proposition 65: This product is not known to contain any chemicals, which are recognized by the State of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS Hazards:	Health: 2	Flammability: 1	Reactivity: 0
NFPA Hazards:	Health: 2	Flammability: 1	Reactivity: 0

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