



**SPI Supplies Division**

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Manufacturer's Cage: 1P573

# Material Safety Data Sheet

[SPI #05059-AB M-Bond 610 Adhesive only \(not sold separately\).](#)

This is one component of a two component kit. [The M-Bond 610 Curing Agent MSDS](#) is also available.

## Section 1 Identification

**Date Effective**

June 7, 2010

(most recent revision)

**Chemical Name/Synonyms**

Two component epoxy-phenolic resin

**Chemical family**..... Epoxy phenolic

**Emergencies**

Contacting CHEMTREC 24 Hour Emergency

Use Only #'s

Worldwide phone : 1-(703)-527-3887

Worldwide FAX : 1-(703)-741-6090

Toll-free phone : 1-(800)-424-9300 USA only

**Product or Trade Name**

Adhesive for SPI #05059-AB M-Bond 610 adhesive system



## Section 2: Composition/Hazardous Ingredients/Identity Information

CAS #	Chemical Identity	Formula	%
109-99-9	Tetrahydrofuran	C <sub>4</sub> H <sub>8</sub> O	58.0 - 64.4

28064-14-4	Epoxy Novolac		26.7 - 30.3
78-93-3	Methyl Ethyl Ketone	C <sub>4</sub> H <sub>8</sub> O	5.3 - 8.9

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### Section 3 Hazard Identification/Health Hazard Data

**Routes of entry:****Inhalation:** Yes**Skin:** Yes**Ingestion:** Accidental**Health Hazards (Acute and Chronic):**

Chronic over-exposure may result in kidney and/or liver damage.

**Carcinogenicity:**

NTP: Not listed

IARC Monographs: Not listed

OSHA Regulated: Not listed

**Signs and Symptoms of Exposure:****Inhalation:** May cause headache, nausea, vomiting, dizziness, narcosis, respiratory failure, low blood pressure, central nervous system depression, coughing, difficult breathing.**Eye contact:** May cause severe irritation or burns. May cause pain on contact. Vapors may irritate eyes.**Skin contact:** May cause severe irritation or burns. Absorption into the skin may cause dermatitis. Repeated contact may cause drying or flaking of the skin.**Ingestion:** May cause headache, nausea, vomiting, dizziness, gastrointestinal irritation.**Medical Conditions Generally Aggravated by Exposure:**Skin disorders, respiratory system disease

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### Section 4: Emergency and First Aid Procedures

Take proper precautions to ensure your own health and safety before attempting to rescue and providing first aid.

**Inhalation:** If inhaled, move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eye lids open.

**Skin Contact:** Flush skin with water while removing contaminated clothing. Wash affected area with soap and water. Launder contaminated clothing before reuse.

**Ingestion:** Call a physician. If swallowed, do not induce vomiting unless directed to do so by a physician. If conscious, give large amounts of water.

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## Section 5: Fire and Explosion Hazard Data

Flash Point (Method used): > -14° C (6° F) PMCC

Auto-Ignition Temperature: Not known

Flammable Limits:

LEL: 1.8

UEL: 11.8

Special Conditions to Avoid: None specified by manufacturer.

Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide.

Fire Fighting Instructions:

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in the positive pressure mode. Move containers from fire area and if can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire and Explosion Hazards:

Vapors may flow along surfaces to distant ignition source and flash back. Closed containers exposed to heat may explode. Contact with strong oxidizers may cause fire. May form explosive peroxides, especially when heated.

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## Section 6: Accidental Release Measures

### Steps to be taken if material is released or spilled:

Wear self-contained breathing apparatus and full protective clothing. Shut off ignition sources; no flares, smoking or flames in area. Stop leak if you can do so without risk. Use water spray to reduce vapors. Take up and sand or other non-combustible absorbent material and place into container for later disposal. Flush area with water.

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## Section 7: Handling and Storage

### Precautions to be taken in handling and storing:

Keep containers tightly closed. Store in a cool, dry, well ventilated, flammable liquid storage area. Keep product out of light.

### Other precautions:

Keep containers tightly sealed. Avoid prolonged exposure to vapors and skin contact.

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## Section 8: Exposure Controls and Personal Protection

### Respiratory Protection:

Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 1000 ppm, a cartridge respirator with organic vapor cartridge is recommended. Above this level, a self-contained breathing apparatus is recommended.

### Ventilation:

Local Exhaust: Keep below TLV

Mechanical: Keep below TLV

Special: N/A

Other: N/A

**Protective Gloves:** Neoprene<sup>®</sup> gloves recommended.

**Eye Protection:** Chemical splash goggles recommended.

**Other Protective Clothing or Equipment:**

Impervious over-clothing as needed. Safety shower and eye wash station in local area.

**Work/Hygienic Practices:** Wash thoroughly after using.

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**Section 9: Physical and Chemical Properties**

Boiling Point/Range: 66°C (151°F)

pH: Not applicable

Vapor Pressure (mm Hg): 145 @ 15°C (59°F)

Vapor density (Air = 1): 2.5

Viscosity: Not known

Specific Gravity (water =1): 0.9

Melting/Freezing Point: N/A

Evaporation Rate (BuAc = 1): 14.5

Volatile organic compounds: 712 g/liter

Decomposition temperatures: Unknown

Solubility in water: Appreciable (more than 50%).

Appearance and odor: Colorless liquid, ether-like odor

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**Section 10: Stability and Reactivity**

Chemical Stability: The product is stable and will not polymerize.

Conditions to Avoid: Heat, flame, other sources of ignition, light and air

Hazardous Products of Deposition: Carbon dioxide and monoxide

Reactions with Air and Water: Does not react with air, water or other common materials.

Materials to avoid: Strong oxidants, strong bases, strong reducing agents.

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## Section 11: Toxicological Information

### Tetrahydrofuran

OSHA PEL: 200 ppm (TWA)  
ACGIH TLV: 200 ppm  
Other: 250 ppm STEL  
LD<sub>50</sub> IPR (RAT) 2900 mg/kg  
LC<sub>50</sub> INHAL (RAT) 78 g/m<sup>3</sup>

### Epoxy Novolac

OSHA PEL: Not established  
ACGIH TLV: Not established  
Other: LD<sub>50</sub> SKIN (Rabbit) > 2000 mg/kg

### Methyl ethyl ketone

OSHA PEL: 200 ppm (TWA)  
ACGIH TLV: 200 ppm  
Other: 300 ppm STEL  
LD<sub>50</sub> ORAL (RAT) 2737 mg/kg  
LD<sub>50</sub> IPR (MOUSE) 616 mg/kg  
LD<sub>50</sub> SKIN (RABBIT) 13 g/m<sup>3</sup>

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## Section 12: Ecological Information

Exotoxicity: Not known. However because of the high water solubility, great care must be taken to prevent this material from making its way into the water ways.

Environmental Fate: No information found in our selected references.

Bioaccumulation: No information found in our selected references.

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## Section 13: Disposal Considerations

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

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## Section 14: Transport Information

Proper Shipping Name: (Tetrahydrofuran/Ethyl Methyl Ketone)  
Class: 3 Flammable Liquids, NOS  
UN Number: 1993

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## Section 15: Regulatory Information

TSCA: All components of this product are listed on the TSCA 8(b) inventory. If identified components of this product are listed under the TSCA 12(b) Export Notification Rule, they will be listed below.

TSCA 12(b) Component	Listed under TSCA Section
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None are listed.

SARA-Section 313 Emissions Reporting:

This product contains a toxic chemical or chemicals (as listed below) subject to the reporting requirements of Section 313 Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS #	Chemical Name	% by weight
78-93-3	Methyl ethyl ketone	5.3-8.9

California Prop. 65:

Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the State has found to cause cancer, birth defects or other reproductive harm. If this product contains an ingredient listed by the State of California to cause cancer or reproductive toxicity, it will be listed below:

### Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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