
I. PRODUCT AND COMPANY IDENTIFICATION

Company: Simpson Strong-Tie Company, Inc.
Address: 5956 W. Las Positas Blvd.
Pleasanton, CA 94588

Product Name: **ET Resin - ET22, ET56, ET020R, ET050R**

Product Description: Epoxy-Tie Adhesive – Epoxy Resin

Emergency Contact No.: 1-800-535-5053 **USA**
1-352-323-3500 **International**

Date Prepared or Revised: February 2007

II. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Names | CAS Numbers |
|--|-------------|
| BisPhenolA/Epichlorohydrin (Epoxy Resin) | 25068-38-6 |
| N-butyl glycidyl ether | 2426-08-6 |
| Silica, amorphous (fumed) | 67762-90-7 |
| Calcium carbonate | 1317-65-3 |
| Titanium dioxide | 1317-80-2 |

The remaining ingredients are designated as “trade secret”.

III. HAZARD IDENTIFICATION**EMERGENCY OVERVIEW**

Non-corrosive.
May be irritating to the eyes and skin.
May cause skin sensitization.

POTENTIAL HEALTH EFFECTS**ACUTE**

Eye Contact: May cause eye irritation, swelling, tearing, redness or cornea damage.
Skin Contact: Moderate irritation. May cause skin sensitization, evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause Central Nervous System depression, evidenced by headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract. May cause Central Nervous System depression or other systemic effects.
Systemic Effects: Lungs, eyes, and skin.

IV. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persist, **CONSULT A PHYSICIAN.**

Skin Contact: Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persist, **CONSULT A PHYSICIAN.**

Ingestion: **DO NOT INDUCE VOMITING.** Never administer anything by mouth to an unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN** if vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Inhalation: Remove patient to fresh air. If patient continues to experience difficulty breathing, **CONSULT A PHYSICIAN.**

V. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, carbon dioxide or dry chemical, aqueous foam.
Fire And Explosion Hazard: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F. Do not allow run-off from fire fighting to enter drains or water courses.
Fire Fighting Equipment and Procedures: Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Clear fire area of all non-emergency personnel. Use water spray to cool fire-exposed surfaces and containers.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use self-contained breathing apparatus and chemical protective clothing. Evacuate personnel to safe areas.
Environmental Precautions: Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.
Clean-up Methods: **Small spills:** Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal. **Large spills:** Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
Additional Information: Notify authority if any exposures to the general public or environment occurs or is likely to occur. Dispose of in accordance with federal, state, and local regulations.

VII. STORAGE AND HANDLING

Storage: Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage.
Handling: To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well-ventilated work area.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Avoid contact with eyes. Wear chemical-resistant safety glasses.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear chemical-resistant gloves and other clothing as required to minimizing contact.
Respirator Protection: Not required for properly ventilated areas.
Exposure Limits:

| COMPONENT | ACGIH (TLV) | OSHA (PEL) |
|--|-----------------------|-------------------------|
| BisPhenolA/Epichlorohydrin (Epoxy Resin) | N/E | N/E |
| N-butyl glycidyl ether | 25 ppm | 25 ppm |
| Silica, amorphous | 2 mg/m ³ * | 25 mg/m ³ ** |
| Calcium carbonate | 10 mg/m ³ | 15 mg/m ³ |
| Titanium dioxide | 10 mg/m ³ | 10 mg/m ³ |

*ACGIH (TLV) for amorphous silica, fume, respirable fraction.

**OSHA PEL for amorphous silica, total fraction is $\frac{80 \text{ mg/m}^3}{\% \text{SiO}_2}$

IX. PHYSICAL AND CHEMICAL PROPERTIES

Form: Paste
Color: White
Odor: Sweet
Vapor Pressure: Not Volatile
Boiling Point: > 260°C (>500°F)
Freezing Point: N/E
Flash Point: 250°F (Open Cup)

Specific Gravity: 1.26 @ 72°F
Solubility In Water: Insoluble

X. REACTIVITY DATA

Stability: Stable under normal storage conditions.
Conditions To Avoid: Incompatible chemicals, heat and open flame.
Materials To Avoid: Oxidizing agents, acids, organic bases, and amines.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, aldehydes, acids and other organic substances.
Hazardous Polymerization: Will not occur.

XI. TOXICOLOGICAL PROPERTIES

Acute Oral (LD₅₀, Rat): N/E
Acute Dermal (LD₅₀, Rabbit): N/E
Acute Inhalation (LC₅₀, Rat): N/E

Chronic Health Hazard The Diglycidyl Ether of Bisphenol A has shown weak carcinogenicity in 2-year mice bioassays. This material has shown activity in-vitro microbial mutagenicity screening and has produced chromosomal aberrations in cultured rat liver cells. No activity when tested by vivo mutagenicity assays.

XII. DISPOSAL CONSIDERATIONS

Waste From Residues / Unused Products: This material is not a hazardous waste by RCRA criteria (40 CFR 261). Dispose of container and unused contents in accordance with federal, state, and local requirements.

XIII. TRANSPORTATION

US DOT (CFR): Not Regulated For Transport.
IATA: Not Regulated For Transport.
IMO: Not Regulated For Transport.

XIV. REGULATORY INFORMATION

| Country | Regulatory List |
|---------|-----------------|
| USA | TSCA |

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification:

Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:

None.

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65):

This product contains small trace of the following chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm.

| Component | Regulation | Concentration | Remarks |
|-----------------------|------------|---------------|--------------|
| Phenylglycidyl ether* | ACGIH | Trace | Carcinogenic |
| Epichlorohydrin* | ACGIH | Trace | Carcinogenic |

* May be absorbed through skin.

XV. OTHER INFORMATION

HMIS RATING

| Health | Flammability | Physical Hazard |
|--------|--------------|-----------------|
| 2 | 1 | 0 |

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

I. PRODUCT AND COMPANY IDENTIFICATION

Company: Simpson Strong-Tie Company, Inc.
Address: 5956 W. Las Positas Blvd.
Pleasanton, CA 94588

Product Name: **ET Hardener - ET22, ET56, ET020H, ET050H**

Product Description: Epoxy-Tie Adhesive – Epoxy Hardener

Emergency Contact No.: 1-800-535-5053 **USA**
1-352-323-3500 **International**

Date Prepared or Revised: February 2007

II. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Names | CAS Numbers |
|-----------------------------|-------------|
| Phenol (Benzenol) | 108-95-2 |
| Benzene-1, 3-Dimethaneamine | 1477-55-0 |
| Silica, amorphous (fumed) | 67762-90-7 |
| Silica, crystalline quartz | 14808-60-7 |

The remaining ingredients are designated as “trade secret”.

III. HAZARD IDENTIFICATION**EMERGENCY OVERVIEW**

Non corrosive.
Moderate irritation to eyes and skin.
May cause skin sensitization.
Components of the product may affect the nervous system.

POTENTIAL HEALTH EFFECTS**ACUTE**

Eye Contact: May cause eye irritation, swelling, tearing, redness or cornea damage.
Skin Contact: Moderate irritation. May cause skin sensitization, evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause Central Nervous System depression, evidenced by giddiness, headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract. May cause headache nausea. May cause Central Nervous System depression or other systemic effects.
Systemic Effects: Lungs, eyes, and skin.

IV. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. If redness, burning, blurred vision, or swelling persist, **CONSULT A PHYSICIAN.**

Skin Contact: Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. If redness, burning, or swelling persist, **CONSULT A PHYSICIAN.**

Ingestion: **DO NOT INDUCE VOMITING.** Never administer anything by mouth to an unconscious person. Rinse out mouth with water, then drink sips of water to remove taste from mouth. **CONSULT A PHYSICIAN** if vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Inhalation: Remove patient to fresh air. If patient continues to experience difficulty breathing, **CONSULT A PHYSICIAN.**

V. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, fog or foam, carbon dioxide, dry chemical, limestone powder.
Fire And Explosion Hazard: Irritating and toxic fumes may be produced at high temperature. In a fire, may produce carbon monoxide, toxic nitrogen oxide, ammonia, and carbon dioxide. Use of water may result in the formation of very toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.
Fire Fighting Equipment and Procedures: Wear full protective clothing and self-contained breathing apparatus for fire fighting. Isolate fuel supply from fire. Clear fire area of all non-emergency personnel.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use self-contained breathing apparatus and chemical protective clothing. Evacuate personnel to safe areas.
Environmental Precautions: Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.
Clean-up Methods: **Small spills:** Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal. **Large spills:** Approach suspected leak areas with caution. Create a dike or trench to contain material. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
Additional Information: Notify authority if any exposures to the general public or environment occurs or is likely to occur. Dispose of in accordance with federal, state, and local regulations.

VII. STORAGE AND HANDLING

Storage: Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage.
Handling: To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well ventilated work area.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Avoid contact with eyes. Wear chemical-resistant safety glasses.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear chemical-resistant gloves and other clothing as required to minimize contact.
Respirator Protection: Not required for properly ventilated areas.
Exposure Limits:

| Chemical Names | ACGIH (TLV) | OSHA (PEL) |
|----------------------------|------------------------------|------------------------------|
| N-aminoethylpiperazine | N/E | N/E |
| Nonylphenol | N/E | N/E |
| Silica,amorphous (fumed) | 2 mg/m ³ * | 20 mg/m ³ ** |
| Silica, crystalline quartz | 0.05mg/m ³ | 3mg/m ³ *** |
| Calcium carbonate | 10 mg/m ³ (total) | 15 mg/m ³ (total) |

*ACGIH TLV for amorphous silica, fume, respirable fraction.

**OSHA PEL for amorphous silica, total fraction is 80 mg/m³ %SiO₂

***OSHA PEL for crystalline silica, quartz, respirable is 10 mg/m³ %SiO₂₊₂

IX. PHYSICAL PROPERTIES

Form: Paste
Color: Black
Odor: Ammonia
Boiling Point: N/E
Freezing Point: N/E
Vapor Pressure: N/E

Flash Point: 225°F Open cup
Specific Gravity: 1.33 @ 72°F
Solubility In Water: Slight

X. REACTIVITY DATA

Stability: Stable under normal storage conditions.
Conditions To Avoid: Incompatible chemicals, heat, and open flame.
Materials To Avoid: Oxidizing agents and acids.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, and nitrogen oxide, and other organic substances.
Hazardous Polymerization: Will not occur.

XI. TOXICOLOGICAL PROPERTIES

Acute Oral (LD₅₀, Rat): N/E
Acute Dermal (LD₅₀, Rabbit): N/E
Acute Inhalation (LC₅₀, Rat): N/E
Chronic Health Hazard Components of this product are not listed as carcinogens in concentrations of 0.1% or greater. Repeated or prolonged exposure may cause allergic reaction and/or limited sensitization.

XII. DISPOSAL CONSIDERATIONS

Waste From Residues / Unused Products: This material is not a hazardous waste by RCRA criteria (40 CFR 261). Dispose of container and unused contents in accordance with federal, state, and local requirements.

XIII. TRANSPORTATION

US DOT(CFR): Not Regulated For Transport.
IATA: Not Regulated For Transport.
IMO: Not Regulated For Transport.

XIV. REGULATORY INFORMATION

| Country | Regulatory List |
|---------|-----------------|
| USA | TSCA |

EPA SARA Title III Section 312 (40 CFR 370) Hazardous Classification:

Acute/Chronic Health Hazard.

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level:

Phenol, 4,4-(1-methylethylidene)bis.

US. California "Safe Drinking Water and Toxic Enforcement Act" (Proposition 65):

This product contains small trace of the following chemicals that are known to the State of California to cause cancer and/or reproductive toxicity and other harm.

| Component | Regulation | Concentration | Remarks |
|---------------|------------|---------------|--------------|
| Carbon Black | ACGIH | Trace | Carcinogenic |
| Silica Quartz | ACGIH | Trace | Carcinogenic |

XV. OTHER INFORMATION

HMIS RATING

| Health | Flammability | Physical Hazard |
|--------|--------------|-----------------|
| 2 | 1 | 0 |

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. This MSDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.