

**1. Identification**

**Product Identification**

**Product Identifier:** CRACK-PAC<sup>®</sup> (ETIPAC10, ETIPAC10KT)  
**Recommended Use:** Two Component Low Viscosity Injection Epoxy  
**Use Restrictions:** None Known.

**Company Identification**

**Company:** Simpson Strong-Tie Company Inc.  
**Address:** 5956 W. Las Positas Blvd.  
 Pleasanton, CA 94588, USA  
**Phone:** 1-800-999-5099  
**Website:** www.strongtie.com  
**Emergency:** 1-800-535-5053 (US/Canada)  
 1-352-323-3500 (International)

For most current SDS, please visit our website at [www.strongtie.com/sds](http://www.strongtie.com/sds)

**2. Hazard Identification**

**General Information**

CRACK-PAC<sup>®</sup> Injection Epoxy is a two part system. The two parts of this product have been assessed according to GHS and are classified below. The final hardened material is considered nonhazardous.

**Resin (blue side) GHS Classification**



**Physical Hazards:** Not Classified.  
**Health Hazards:** Skin Corrosion/Irritation Category 2  
 Serious Eye Damage/Irritation Category 2A  
 Sensitization, Skin Category 1  
**Environmental Hazards:** Acute Aquatic Environmental Hazard Category 2  
 Chronic Aquatic Environmental Hazard Category 2

**Signal Word:** **WARNING!**  
**Hazard Statements:** Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**  
**Prevention:** Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing mist or vapor. Wash thoroughly after handling. Avoid release to the environment.  
**Response:** If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect Spillage.  
**Storage:** Store locked up. Store in a well-ventilated place. Store between 45-90°F (7-32°C).  
**Disposal:** Dispose of contents/container in accordance with local/regional/national regulations.

**Hardener (clear side) GHS Classification**



**Physical Hazards:** Not Classified.  
**Health Hazards:** Acute Toxicity, Oral Category 4  
 Acute Toxicity, Dermal Category 4  
 Acute Toxicity, Inhalation Category 4

<b>Environmental Hazards:</b>	Skin Corrosion/Irritation	Category 1B
	Serious Eye Damage/Irritation	Category 1
	Sensitization, Skin	Category 1
	STOT, Single Exposure	Category 1 (corrosive to the respiratory tract)
	Acute Aquatic Environmental Hazard	Category 3
	Chronic Aquatic Environmental Hazard	Category 3

**Signal Word:** **DANGER!**  
**Hazard Statements:** Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Corrosive to the respiratory tract. Harmful to aquatic life with long lasting effects.

**Precautionary Statements:**  
**Prevention:** Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Do not breathe vapor. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.  
**Response:** If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect Spillage.  
**Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store between 45-90°F (7-32°C).  
**Disposal:** Dispose of contents/container in accordance with local/regional/national regulations.

**Hazards Not Otherwise Classified (HNOC)**

None known.

**3. Composition Information**

**General Information**

This product is a mixture. Hazardous ingredients for each component are listed below. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

**Resin (blue side)**

Chemical Name	CAS Number	Weight %
Bisphenol A/Epichlorohydrin	25068-38-6	50-80

**Hardener (clear side)**

Chemical Name	CAS Number	Weight %
Benzene-1,3-dimethanamine	1477-55-0	70-90
Diethylenetriamine	111-40-0	10-30

**4. First-Aid Measures**

**General Information**

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

**Routes of Exposure**

**Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician.**  
**Skin Contact:** Remove contaminated clothing, immediately wash affected area with soap and water. Do not apply greases or ointments. If skin irritation persists, **consult a physician.**

**Ingestion:** Rinse mouth immediately. Give large amounts of milk or water, if person is conscious. Only induce vomiting at the instruction of medical personnel. **Consult a physician.**

**Inhalation:** Immediately remove from further exposure. **Get immediate medical assistance.** For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

**Most Important Symptoms**

Irritant effects. Sensitization. Symptoms include itching, burning, redness and tearing. May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Cough. Labored breathing. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Prolonged contact causes serious eye and tissue damage. May cause serious chemical burns to the skin.

**5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** Extinguish with foam, carbon dioxide, dry powder, or water fog.

**Additional Information:** Do not use a solid water stream as it may scatter and spread fire.

**Hazards during Fire-Fighting:** Hazardous decomposition products may occur when materials polymerize at temperatures above 500 °F (260°C). Do not allow run-off from fire-fighting to enter drains or water courses.

**Fire-Fighting Procedures:** Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. Accidental Release Measures**

**Personal Precautions**

Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

**Clean-Up Methods**

**Small spills:** Wipe up with absorbent material (e.g. cloth, fleece). Place in a leak-proof container. Seal tightly for proper disposal. Clean surface thoroughly.

**Large spills:** Approach suspected leak areas with caution. Evacuate and ventilate the area. Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in a leak-proof container. Seal tightly for proper disposal. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental Precautions**

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

**7. Handling and Storage**

**Handling**

Mechanical ventilation or local exhaust ventilation is recommended. Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Observe good industrial hygiene practices.

**Storage**

Store in a closed container away from incompatible materials. Keep in original container. Keep container tightly closed. Store in a dry place out of direct sunlight. Store between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Store in a well-ventilated place. Store locked up. Keep out of the reach of children.

**8. Exposure Controls / Personal Protection**

**Personal Protective Equipment**

**General Protection:** Wear appropriate personal protective equipment.  
**Eye Protection:** Wear chemical splash goggles or safety glasses with side shield.  
**Hand Protection:** Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.  
**Skin and Body Protection:** Wear long sleeve shirt/long pants and other clothing as required to minimize contact.  
**Respirator Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.  
**General Hygiene:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Engineering Controls**

When using indoors good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Ready access to running water is required. Provide eyewash station.

**Exposure Limits**

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Benzene-1,3-dimethane amine (CAS 1477-55-0)	N/E	0.1 mg/m <sup>3</sup> (Ceiling)	0.1 mg/m <sup>3</sup> (Ceiling)
Diethylenetriamine (CAS 111-40-0)	N/E	1 ppm (TWA)	4 mg/m <sup>3</sup> (REL, TWA) 1 ppm (REL, TWA)

**Additional Information**

**After Cure:** Product forms an innocuous solid. Processing after cure (grinding or cutting) may produce dust containing compounds that present an inhalation hazard.

**9. Physical and Chemical Properties**

<u>Property</u>	<u>Resin</u>	<u>Hardener</u>
<b>Physical State:</b>	Liquid	Liquid
<b>Color:</b>	Blue	Clear
<b>Odor:</b>	Strong Acrid	Ammonia
<b>pH:</b>	No data	12
<b>Flammability limit – lower %:</b>	No data	No data
<b>Flammability limit – upper %:</b>	No data	No data
<b>Vapor Pressure:</b>	No data	No data
<b>Vapor Density:</b>	No data	No data
<b>Solubility:</b>	Insoluble in water	Slightly soluble in water
<b>Freezing/Melting Point:</b>	No data	No data
<b>Boiling Point:</b>	No data	No data
<b>Flash Point:</b>	>250 °F (121.1 °C) Open Cup	230 °F (110 °C) Closed Cup
<b>Evaporation Rate:</b>	No data	No data
<b>Decomposition Temperature:</b>	No data	No data
<b>Specific Gravity:</b>	No data	No data
<b>VOC (after cure):</b>	7 g/L	7 g/L
<b>Kow:</b>	No data	No data
<b>Viscosity:</b>	No data	No data
<b>Corrosiveness:</b>	Non-corrosive	Corrosive

**10. Stability and Reactivity**

**Resin (blue side)**

**Reactivity:** This product is stable and non-reactive under normal conditions.  
**Chemical Stability:** Stable under normal storage conditions.  
**Condition to Avoid:** High heat and open flame.  
**Substances to Avoid:** Oxidizing agents, acids, organic bases, and amines.

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**Hazardous Reactions:** Hazardous polymerization does not occur.  
**Decomposition Products:** Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

### Hardener (clear side)

**Reactivity:** This product is stable and non-reactive under normal conditions.  
**Chemical Stability:** Stable under normal storage conditions.  
**Condition to Avoid:** High heat and open flame.  
**Substances to Avoid:** Strong oxidizing agents. Strong acids. Epoxy resins.  
**Hazardous Reactions:** Hazardous polymerization does not occur.  
**Decomposition Products:** Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

## 11. Toxicological Information

### Likely Routes of Exposure

**Ingestion:** Harmful if swallowed. Causes digestive tract burns.  
**Inhalation:** Harmful if inhaled. Causes respiratory tract burns.  
**Skin contact:** Harmful in contact with skin. Causes severe skin burns. May cause an allergic skin reaction.  
**Eye contact:** Causes serious eye burns.

### Information on Toxicological Effects

**Acute toxicity:** Occupational exposure to the substance or mixture may cause adverse effects.

Product	Species	Test Result
CRACK-PAC <sup>®</sup> Hardener (CAS mixture)		
<b>Acute, Oral, LD50</b>	Rat	900 mg/kg

**Skin corrosion/irritation:** Causes skin irritation. Causes severe skin burns.  
**Eye damage/eye irritation:** Causes serious eye irritation. Causes serious eye damage.  
**Respiratory sensitization:** No data available.  
**Skin sensitization:** May cause an allergic skin reaction.  
**Germ cell mutagenicity:** No data available.  
**Carcinogenicity:** This product is not considered a carcinogen by IARC, NTP, ACGIH, or OSHA.  
**Reproductive toxicity:** No data available.  
**Aspiration hazard:** No data available.  
**Specific target organ toxicity:**  
**Single exposure** Corrosive to the respiratory tract.  
**Repeated exposure** No data available.

### Further Information

Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

## 12. Ecological Information

### General Information

Information given is based on data on the components and the ecotoxicology of similar products. Resin is classified as toxic to aquatic life with long lasting effects. Hardener is classified as harmful to aquatic life with long lasting effects. Avoid release to the environment.

### Supporting Data

Component	Species	Test Result
Bisphenol-A/Epichlorohydrin (25068-38-6)	Fish, LC50	1.5 mg/l, 96 hours
	<b>Aquatic, Crustacea, EC50</b>	Daphnia Magna 2.7 mg/l, 48 hours
Benzene-1,3-dimethaneamine (CAS 1477-55-0)		
	<b>Aquatic, Crustacea, EC50</b>	Daphnia Magna 15.2 mg/l, 48 hours

**Persistence and degradability:** This product is not expected to be readily biodegradable.  
**Bioaccumulative potential:** No data available for this product.

**Mobility in soil:** No data available.

**Further Information**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

**13. Disposal Consideration**

**Waste Disposal of Substance:** Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Container Disposal:** Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Disposal of Cured Product:** Grind or chip off surfaces. Solid material does not need special disposal considerations.

**14. Transportation Information**

**Resin (blue side)**

**UN number:** UN3082  
**UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-Epichlorohydrin), 9, III, Marine Pollutant

**Precautions:** Marine Pollutant  
**Required Labels:** 9  
**ERG Code (IATA):** 9L  
**EmS (IMDG):** F-A, S-F

**Hardener (clear side)**

**UN number:** UN2735  
**UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-dimethaneamine(MXDA)), 8, II

**Precautions:** Corrosive  
**Required Labels:** 8  
**ERG Code (IATA):** 8L  
**EmS (IMDG):** F-A, S-B

**Additional Information**

**Special precautions for user:** Read safety instructions, SDS and emergency procedures before handling.  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** This substance/mixture is not intended to be transported in bulk.

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

**15. Regulatory Information**

**United States**

**Federal Regulations:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.  
**CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

Hazard Categories:	Immediate	Delayed	Fire	Pressure	Reactivity
Resin	Yes	Yes	No	No	No
Hardener	Yes	Yes	No	No	No

**SARA 302 Extremely hazardous substance:** No  
**SARA 311/312 Hazardous chemical:** Yes

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**SARA 313 (TRI reporting)**

Chemical Name	CAS Number	% by weight
Naphthalene	91-20-3	< 0.1

**US State Right-To-Know Lists**

Chemical	Massachusetts RTK	New Jersey Work and Community RTK Act	Pennsylvania Worker and Community RTK Law	Rhode Island RTK
Benzene-1,3-dimethaneamine (CAS 1477-55-0)	Listed		Listed	
Diethylenetriamine (CAS 111-40-0)	Listed		Listed	



**US. California Proposition 65:** WARNING: This product contains a chemical listed by the State of California as known to cause cancer, birth defects, or reproductive harm.

Component	Regulation	% In Blend (approx.)	Remark
Naphthalene (91-20-3)	ACGIH	< 0.1	Carcinogenic

**Canada**

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

**WHMIS Classification**

	
Class E: Corrosive	Class D-2A: Material Causing other toxic effects

**International**

**International Inventories**

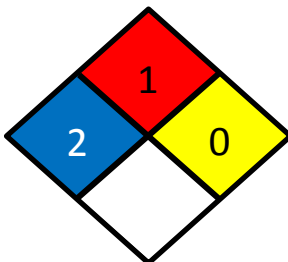
Country or Region	Inventory	On Inventory? (Yes/No)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

**16. Other Information**

Date Prepared or Revised: September 2014  
Supersedes: August 2012

**Additional Resin (blue side) Classifications**

**NFPA Ratings**



**HMIS Rating**

HEALTH HAZARD	2
FLAMMABILITY HAZARD	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

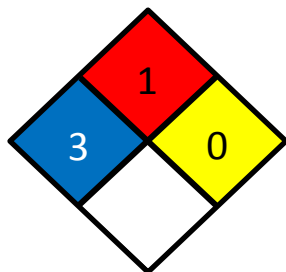
# CRACK-PAC<sup>®</sup> Injection Epoxy

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### Additional Hardener (black side) Classifications

#### NFPA Ratings



#### HMIS Rating

HEALTH HAZARD	3
FLAMMABILITY HAZARD	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

### Abbreviations

- ACGIH:** American Conference of Governmental Industrial Hygienists
- CAS No.:** Chemical Abstract Service Registry Number
- CERCLA:** Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
- CPR:** Controlled Product Regulations (Canada)
- DOT:** Department of Transportation (U.S.)
- EPA:** Environmental Protection Agency (U.S.)
- GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- HEPA:** High-Efficiency Particulate Air
- HMIS:** Hazardous Materials Identification System
- IARC:** International Agency for Research on Cancer
- IATA:** International Air Transport Association
- IMDG:** International Maritime Dangerous Goods code
- NIOSH:** National Institute of Occupational Safety and Health (U.S.)
- NFPA:** National Fire Protection Association (US)
- NTP:** National Toxicology Program (US)
- OSHA:** Occupational Safety and Health Administration (U.S.)
- PEL:** Permissible Exposure Limit
- SARA:** Superfund Amendments and Reauthorization Act (U.S. EPA)
- SDS:** Safety Data Sheet
- STEL:** Short Term Exposure Limit (15 minute Time Weighted Average)
- STOT:** Specific Target Organ Toxicity (GHS Classification)
- TLV:** Threshold Limit Value
- TSCA:** Toxic Substances Control Act (U.S.)
- TWA:** Time Weighted Average (exposure for 8-hour workday)
- VOC:** Volatile Organic Compounds
- WHMIS:** Canadian Workplace Hazardous Materials Information System

### Disclaimer

This Safety Data Sheet (SDS) 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 SDS. This SDS 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.

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### Internal

#### FOR INTERNAL USE ONLY

CRACK-PAC Resin:  
XCOM3B – 90% Cartridge

CRACK-PAC Hardener:  
XCOM3B – 10% Cartridge  
XCORR – 10% Cartridge



**1. Identification**

**Product Identification**

**Product Identifier:** CRACK-PAC<sup>®</sup> (ETIPAC10, ETIPAC10KT)  
**Recommended Use:** Two Component Low Viscosity Injection Epoxy  
**Use Restrictions:** None Known.

**Company Identification**

**Company:** Simpson Strong-Tie Company Inc.  
**Address:** 5956 W. Las Positas Blvd.  
 Pleasanton, CA 94588, USA  
**Phone:** 1-800-999-5099  
**Website:** www.strongtie.com  
**Emergency:** 1-800-535-5053 (US/Canada)  
 1-352-323-3500 (International)

For most current SDS, please visit our website at [www.strongtie.com/sds](http://www.strongtie.com/sds)

**2. Hazard Identification**

**General Information**

CRACK-PAC<sup>®</sup> Injection Epoxy is a two part system. The two parts of this product have been assessed according to GHS and are classified below. The final hardened material is considered nonhazardous.

**Resin (blue side) GHS Classification**



**Physical Hazards:** Not Classified.  
**Health Hazards:** Skin Corrosion/Irritation Category 2  
 Serious Eye Damage/Irritation Category 2A  
 Sensitization, Skin Category 1  
**Environmental Hazards:** Acute Aquatic Environmental Hazard Category 2  
 Chronic Aquatic Environmental Hazard Category 2

**Signal Word:** **WARNING!**  
**Hazard Statements:** Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.  
 Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**  
**Prevention:** Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing mist or vapor. Wash thoroughly after handling. Avoid release to the environment.  
**Response:** If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect Spillage.  
**Storage:** Store locked up. Store in a well-ventilated place. Store between 45-90°F (7-32°C).  
**Disposal:** Dispose of contents/container in accordance with local/regional/national regulations.

**Hardener (clear side) GHS Classification**



**Physical Hazards:** Not Classified.  
**Health Hazards:** Acute Toxicity, Oral Category 4  
 Acute Toxicity, Dermal Category 4  
 Acute Toxicity, Inhalation Category 4

<b>Environmental Hazards:</b>	Skin Corrosion/Irritation	Category 1B
	Serious Eye Damage/Irritation	Category 1
	Sensitization, Skin	Category 1
	STOT, Single Exposure	Category 1 (corrosive to the respiratory tract)
	Acute Aquatic Environmental Hazard	Category 3
	Chronic Aquatic Environmental Hazard	Category 3

**Signal Word:** **DANGER!**  
**Hazard Statements:** Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Corrosive to the respiratory tract. Harmful to aquatic life with long lasting effects.

**Precautionary Statements:**  
**Prevention:** Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Do not breathe vapor. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.  
**Response:** If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect Spillage.  
**Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store between 45-90°F (7-32°C).  
**Disposal:** Dispose of contents/container in accordance with local/regional/national regulations.

**Hazards Not Otherwise Classified (HNOC)**

None known.

**3. Composition Information**

**General Information**

This product is a mixture. Hazardous ingredients for each component are listed below. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

**Resin (blue side)**

Chemical Name	CAS Number	Weight %
Bisphenol A/Epichlorohydrin	25068-38-6	50-80

**Hardener (clear side)**

Chemical Name	CAS Number	Weight %
Benzene-1,3-dimethanamine	1477-55-0	70-90
Diethylenetriamine	111-40-0	10-30

**4. First-Aid Measures**

**General Information**

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

**Routes of Exposure**

**Eye Contact:** Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician.**  
**Skin Contact:** Remove contaminated clothing, immediately wash affected area with soap and water. Do not apply greases or ointments. If skin irritation persists, **consult a physician.**

**Ingestion:** Rinse mouth immediately. Give large amounts of milk or water, if person is conscious. Only induce vomiting at the instruction of medical personnel. **Consult a physician.**

**Inhalation:** Immediately remove from further exposure. **Get immediate medical assistance.** For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

**Most Important Symptoms**

Irritant effects. Sensitization. Symptoms include itching, burning, redness and tearing. May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Cough. Labored breathing. Be aware that symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure. Prolonged contact causes serious eye and tissue damage. May cause serious chemical burns to the skin.

**5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** Extinguish with foam, carbon dioxide, dry powder, or water fog.

**Additional Information:** Do not use a solid water stream as it may scatter and spread fire.

**Hazards during Fire-Fighting:** Hazardous decomposition products may occur when materials polymerize at temperatures above 500 °F (260°C). Do not allow run-off from fire-fighting to enter drains or water courses.

**Fire-Fighting Procedures:** Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. Accidental Release Measures**

**Personal Precautions**

Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

**Clean-Up Methods**

**Small spills:** Wipe up with absorbent material (e.g. cloth, fleece). Place in a leak-proof container. Seal tightly for proper disposal. Clean surface thoroughly.

**Large spills:** Approach suspected leak areas with caution. Evacuate and ventilate the area. Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in a leak-proof container. Seal tightly for proper disposal. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental Precautions**

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

**7. Handling and Storage**

**Handling**

Mechanical ventilation or local exhaust ventilation is recommended. Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Observe good industrial hygiene practices.

**Storage**

Store in a closed container away from incompatible materials. Keep in original container. Keep container tightly closed. Store in a dry place out of direct sunlight. Store between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Store in a well-ventilated place. Store locked up. Keep out of the reach of children.

**8. Exposure Controls / Personal Protection**

**Personal Protective Equipment**

**General Protection:** Wear appropriate personal protective equipment.  
**Eye Protection:** Wear chemical splash goggles or safety glasses with side shield.  
**Hand Protection:** Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.  
**Skin and Body Protection:** Wear long sleeve shirt/long pants and other clothing as required to minimize contact.  
**Respirator Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.  
**General Hygiene:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Engineering Controls**

When using indoors good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Ready access to running water is required. Provide eyewash station.

**Exposure Limits**

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Benzene-1,3-dimethane amine (CAS 1477-55-0)	N/E	0.1 mg/m <sup>3</sup> (Ceiling)	0.1 mg/m <sup>3</sup> (Ceiling)
Diethylenetriamine (CAS 111-40-0)	N/E	1 ppm (TWA)	4 mg/m <sup>3</sup> (REL, TWA) 1 ppm (REL, TWA)

**Additional Information**

**After Cure:** Product forms an innocuous solid. Processing after cure (grinding or cutting) may produce dust containing compounds that present an inhalation hazard.

**9. Physical and Chemical Properties**

<u>Property</u>	<u>Resin</u>	<u>Hardener</u>
<b>Physical State:</b>	Liquid	Liquid
<b>Color:</b>	Blue	Clear
<b>Odor:</b>	Strong Acrid	Ammonia
<b>pH:</b>	No data	12
<b>Flammability limit – lower %:</b>	No data	No data
<b>Flammability limit – upper %:</b>	No data	No data
<b>Vapor Pressure:</b>	No data	No data
<b>Vapor Density:</b>	No data	No data
<b>Solubility:</b>	Insoluble in water	Slightly soluble in water
<b>Freezing/Melting Point:</b>	No data	No data
<b>Boiling Point:</b>	No data	No data
<b>Flash Point:</b>	>250 °F (121.1 °C) Open Cup	230 °F (110 °C) Closed Cup
<b>Evaporation Rate:</b>	No data	No data
<b>Decomposition Temperature:</b>	No data	No data
<b>Specific Gravity:</b>	No data	No data
<b>VOC (after cure):</b>	7 g/L	7 g/L
<b>Kow:</b>	No data	No data
<b>Viscosity:</b>	No data	No data
<b>Corrosiveness:</b>	Non-corrosive	Corrosive

**10. Stability and Reactivity**

**Resin (blue side)**

**Reactivity:** This product is stable and non-reactive under normal conditions.  
**Chemical Stability:** Stable under normal storage conditions.  
**Condition to Avoid:** High heat and open flame.  
**Substances to Avoid:** Oxidizing agents, acids, organic bases, and amines.

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**Hazardous Reactions:** Hazardous polymerization does not occur.  
**Decomposition Products:** Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

### Hardener (clear side)

**Reactivity:** This product is stable and non-reactive under normal conditions.  
**Chemical Stability:** Stable under normal storage conditions.  
**Condition to Avoid:** High heat and open flame.  
**Substances to Avoid:** Strong oxidizing agents. Strong acids. Epoxy resins.  
**Hazardous Reactions:** Hazardous polymerization does not occur.  
**Decomposition Products:** Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

## 11. Toxicological Information

### Likely Routes of Exposure

**Ingestion:** Harmful if swallowed. Causes digestive tract burns.  
**Inhalation:** Harmful if inhaled. Causes respiratory tract burns.  
**Skin contact:** Harmful in contact with skin. Causes severe skin burns. May cause an allergic skin reaction.  
**Eye contact:** Causes serious eye burns.

### Information on Toxicological Effects

**Acute toxicity:** Occupational exposure to the substance or mixture may cause adverse effects.

Product	Species	Test Result
CRACK-PAC <sup>®</sup> Hardener (CAS mixture)		
<b>Acute, Oral, LD50</b>	Rat	900 mg/kg

**Skin corrosion/irritation:** Causes skin irritation. Causes severe skin burns.  
**Eye damage/eye irritation:** Causes serious eye irritation. Causes serious eye damage.  
**Respiratory sensitization:** No data available.  
**Skin sensitization:** May cause an allergic skin reaction.  
**Germ cell mutagenicity:** No data available.  
**Carcinogenicity:** This product is not considered a carcinogen by IARC, NTP, ACGIH, or OSHA.  
**Reproductive toxicity:** No data available.  
**Aspiration hazard:** No data available.  
**Specific target organ toxicity:**  
**Single exposure** Corrosive to the respiratory tract.  
**Repeated exposure** No data available.

### Further Information

Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

## 12. Ecological Information

### General Information

Information given is based on data on the components and the ecotoxicology of similar products. Resin is classified as toxic to aquatic life with long lasting effects. Hardener is classified as harmful to aquatic life with long lasting effects. Avoid release to the environment.

### Supporting Data

Component	Species	Test Result
Bisphenol-A/Epichlorohydrin (25068-38-6)	Fish, LC50	1.5 mg/l, 96 hours
	<b>Aquatic, Crustacea, EC50</b>	Daphnia Magna 2.7 mg/l, 48 hours
Benzene-1,3-dimethaneamine (CAS 1477-55-0)		
	<b>Aquatic, Crustacea, EC50</b>	Daphnia Magna 15.2 mg/l, 48 hours

**Persistence and degradability:** This product is not expected to be readily biodegradable.  
**Bioaccumulative potential:** No data available for this product.

**Mobility in soil:** No data available.

**Further Information**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

**13. Disposal Consideration**

**Waste Disposal of Substance:** Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Container Disposal:** Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Disposal of Cured Product:** Grind or chip off surfaces. Solid material does not need special disposal considerations.

**14. Transportation Information**

**Resin (blue side)**

**UN number:** UN3082  
**UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-Epichlorohydrin), 9, III, Marine Pollutant

**Precautions:** Marine Pollutant  
**Required Labels:** 9  
**ERG Code (IATA):** 9L  
**EmS (IMDG):** F-A, S-F

**Hardener (clear side)**

**UN number:** UN2735  
**UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-dimethanamine(MXDA)), 8, II

**Precautions:** Corrosive  
**Required Labels:** 8  
**ERG Code (IATA):** 8L  
**EmS (IMDG):** F-A, S-B

**Additional Information**

**Special precautions for user:** Read safety instructions, SDS and emergency procedures before handling.  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** This substance/mixture is not intended to be transported in bulk.

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

**15. Regulatory Information**

**United States**

**Federal Regulations:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.  
**CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

Hazard Categories:	Immediate	Delayed	Fire	Pressure	Reactivity
Resin	Yes	Yes	No	No	No
Hardener	Yes	Yes	No	No	No

**SARA 302 Extremely hazardous substance:** No  
**SARA 311/312 Hazardous chemical:** Yes

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**SARA 313 (TRI reporting)**

Chemical Name	CAS Number	% by weight
Naphthalene	91-20-3	< 0.1

**US State Right-To-Know Lists**

Chemical	Massachusetts RTK	New Jersey Work and Community RTK Act	Pennsylvania Worker and Community RTK Law	Rhode Island RTK
Benzene-1,3-dimethaneamine (CAS 1477-55-0)	Listed		Listed	
Diethylenetriamine (CAS 111-40-0)	Listed		Listed	



**US. California Proposition 65:** WARNING: This product contains a chemical listed by the State of California as known to cause cancer, birth defects, or reproductive harm.

Component	Regulation	% In Blend (approx.)	Remark
Naphthalene (91-20-3)	ACGIH	< 0.1	Carcinogenic

**Canada**

This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.

**WHMIS Classification**

	
<b>Class E: Corrosive</b>	<b>Class D-2A: Material Causing other toxic effects</b>

**International**

**International Inventories**

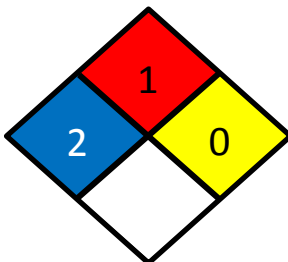
Country or Region	Inventory	On Inventory? (Yes/No)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

**16. Other Information**

Date Prepared or Revised: September 2014  
Supersedes: August 2012

**Additional Resin (blue side) Classifications**

**NFPA Ratings**

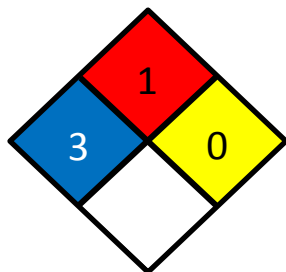


**HMIS Rating**

HEALTH HAZARD	2
FLAMMABILITY HAZARD	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

**Additional Hardener (black side) Classifications**

**NFPA Ratings**



**HMIS Rating**

HEALTH HAZARD	3
FLAMMABILITY HAZARD	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

**Abbreviations**

- ACGIH:** American Conference of Governmental Industrial Hygienists
- CAS No.:** Chemical Abstract Service Registry Number
- CERCLA:** Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
- CPR:** Controlled Product Regulations (Canada)
- DOT:** Department of Transportation (U.S.)
- EPA:** Environmental Protection Agency (U.S.)
- GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- HEPA:** High-Efficiency Particulate Air
- HMIS:** Hazardous Materials Identification System
- IARC:** International Agency for Research on Cancer
- IATA:** International Air Transport Association
- IMDG:** International Maritime Dangerous Goods code
- NIOSH:** National Institute of Occupational Safety and Health (U.S.)
- NFPA:** National Fire Protection Association (US)
- NTP:** National Toxicology Program (US)
- OSHA:** Occupational Safety and Health Administration (U.S.)
- PEL:** Permissible Exposure Limit
- SARA:** Superfund Amendments and Reauthorization Act (U.S. EPA)
- SDS:** Safety Data Sheet
- STEL:** Short Term Exposure Limit (15 minute Time Weighted Average)
- STOT:** Specific Target Organ Toxicity (GHS Classification)
- TLV:** Threshold Limit Value
- TSCA:** Toxic Substances Control Act (U.S.)
- TWA:** Time Weighted Average (exposure for 8-hour workday)
- VOC:** Volatile Organic Compounds
- WHMIS:** Canadian Workplace Hazardous Materials Information System

**Disclaimer**

This Safety Data Sheet (SDS) 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 SDS. This SDS 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.

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**Internal**

<b>FOR INTERNAL USE ONLY</b>	
CRACK-PAC Resin: XCOM3B – 90% Cartridge	CRACK-PAC Hardener: XCOM3B – 10% Cartridge XCORR – 10% Cartridge