SET-XP® *High-Strength Epoxy Adhesive*
SAFETY DATA SHEET

1. Identification

Product Identification

Product Identifier: **SET-XP®**
Recommended Use: SET-XP® is a high-strength, anchoring adhesive for cracked and uncracked concrete.
Use Restrictions: To ensure proper installation use according to package directions, complete application instructions can be found in Simpson Strong-Tie catalogs or online at strongtie.com.

Company Identification

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

2. Hazard Identification

General Information

SET-XP High-Strength Epoxy Adhesive is for anchoring doweling in cracked and uncracked concrete and masonry. It is a two-part (1:1) system packaged as a single unit in a duel cartridge. The two parts of this product have been individually assessed according to the Globally Harmonized System (GHS). Exposure to the individual components will only occur with improper use. The resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. The mixed product can be assumed to carry the hazards of each component until the product has fully hardened. The final cured product will be uniformly teal in color and can be considered nonhazardous. Some hazards may apply upon grinding or cutting through hardened product. This Safety Data Sheet covers the hazards and responses for the safe use of this product.

Resin (White Side) GHS Classification

Classification according to HazCom2012 (GHS)

Physical Hazards:	Not Classified.		
Health Hazards:	Skin Corrosion/Irritation	Category 2	H315: Causes skin irritation
	Serious Eye Damage/Irritation	Category 2	H319: Causes serious eye irritation
	Sensitization, Skin	Category 1	H317: May cause an allergic skin reaction
	Germ Cell Mutagenicity	Category 2	H341: Suspected of causing genetic defects
	Carcinogenicity	Category 2	H351: Suspected of causing cancer
Environmental Hazards:	Chronic Aquatic Hazard	Category 2	H411: Toxic to aquatic life with long lasting effects

Main Symptoms: Irritation of eyes and skin. Symptoms include redness, itching, burning, tearing, swelling, and blurred vision. May cause rash/allergic reaction to the skin. Long term exposure may cause chronic effects.

GHS Label Elements

Exclamation Point **Chronic Health** **Environmental Hazard**

Contains: Resins, Butyl Glycidyl Ether, Titanium Dioxide
Signal Word: **WARNING!**
Hazard Statements:

H315:	Causes skin irritation.
H319:	Causes serious eye irritation.
H317:	May cause an allergic skin reaction.
H341:	Suspected of causing genetic defects.
H351:	Suspected of causing cancer.
H411:	Toxic to aquatic life with long lasting effects.

Precautionary Statements:
Prevention:

P102:	Keep out of reach of children.
P103:	Read label before use.

	P202:	Do not handle until all safety precautions have been read and understood.
	P261:	Avoid breathing dust, mist, or vapors.
	P264:	Wash thoroughly after handling.
	P271:	Use only outdoors or in a well-ventilated area.
	P272:	Contaminated work clothing should not be allowed out of the workplace.
	P273:	Avoid release to environment.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P302+P352:	IF ON SKIN: Wash with plenty of water.
	P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
	P362+P364:	Take off contaminated clothing and wash before re-use.
	P304+P340:	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313:	If eye irritation persists: Get medical advice/attention.
	P308+P313:	If exposed or concerned: Call a poison center/doctor.
	P391:	Collect spillage.
Storage:	P403:	Store in a well-ventilated place.
	P405:	Store locked up.
	P411:	Store between 45-90°F (7-32°C).
Disposal:	P501:	Dispose of contents/container in accordance with local/regional regulations.

Supplemental Label Information: None known.

Hardener (Green Side) GHS Classification

Classification according to HazCom2012 (GHS)

Physical Hazards: Not Classified.

Health Hazards:

Skin Corrosion/Irritation	Category 1	H314: Causes severe skin burns
Serious Eye Damage/Irritation	Category 1	H318: Causes serious eye damage
Sensitization, Skin	Category 1	H317: May cause an allergic skin reaction
Germ Cell Mutagenicity	Category 2	H341: Suspected of causing genetic defects
STOT, Repeated Exposure	Category 2	H373: May cause damage to organs through prolonged and repeated exposure

Environmental Hazards: Not Classified.

Main Symptoms: Damage to the eyes and skin. Symptoms include burns, redness, itching, tearing, swelling, and blurred vision. May cause rash/allergic reaction to the skin. Long term exposure may cause chronic effects.

GHS Label Elements

Corrosive | Exclamation Point | Chronic Health

Contains:	Crystalline Silica (Quartz), Phenols, Amines	
Signal Word:	**DANGER!**	
Hazard Statements:	H314:	Causes severe skin burns and eye damage.
	H318:	Causes serious eye damage.
	H317:	May cause an allergic skin reaction.
	H341:	Suspected of causing genetic defects.
	H373:	May cause damage to organs through prolonged and repeated exposure.
Precautionary Statements:		
Prevention:	P102:	Keep out of reach of children.
	P103:	Read label before use.
	P202:	Do not handle until all safety precautions have been read and understood.
	P260:	Do not breathe dust, mist, or vapor.
	P264:	Wash thoroughly after handling.
	P270:	Do not eat, drink or smoke when using this product.

	P271:	Use only outdoors or in a well-ventilated area.
	P272:	Contaminated work clothing must not be allowed out of the workplace.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
	P284:	In case of inadequate ventilation wear respiratory protection.
Response:	P301+P330+P331:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P310:	Immediately call a POSION CENTER/doctor.
	P303+P361+P353:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
	P363:	Wash contaminated clothing before reuse.
	P304+P340:	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P315:	Get immediately medical advice/attention.
	P337+P313:	If eye irritation persists: Get medical advice/attention.
	P308+P313:	If exposed or concerned: Get medical advice/attention.
Storage:	P403+P233:	Store in a well-ventilated place. Keep container tightly closed.
	P405:	Store locked up.
	P411:	Store between 45-90°F (7-32°C).
Disposal:	P501:	Dispose of contents/container in accordance with local/regional regulations.

Supplemental Label Information: None known.

Hazards Not Otherwise Classified (HNOC)

The above hazards are for the uncured components of SET-XP. Upon combination of the two components, an innocuous solid which does not present any immediate hazards is formed. Upon grinding or cutting the cured product, the following hazards may apply. Ensure good work practice and use of personal protective equipment as needed to control exposure to processing dust.


Chronic Health

Health Hazard:	Carcinogenicity	Category 1A
OSHA Hazard:	STOT, Repeated Exposure	Category 1
	Combustible Dust	
Hazard Statement:	May cause cancer. May cause damage to organs (lungs) with prolonged and repeated exposure. Can form explosive air-dust mixtures, avoid creating dust.	
Precautionary Statement:	Do not breathe dust. Do not allow dust to build up on surfaces.	

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.

List of abbreviations and symbols:
Classification: Global Harmonized System Classifications
The full text for H-phrases is displayed in section 16. All concentrations are in percent by weight unless otherwise noted.

Resin (White Side)

Chemical Name	Weight %	CAS Number	EC Number
Bisphenol-A Based Epoxy Resin	30-50	25068-38-6	500-033-5
Classifications: Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, Aquatic Chronic 2: H411			
Phenolic Novolac Resin	40-70	28064-14-4	608-164-0
Classifications: Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, Aquatic Chronic 2: H411			
Butyl Glycidyl Ether	1-5	2426-08-6	219-376-4
Classifications: Flam. Liq. 3: H226, Acute Tox. 4: H302+H332, Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, GCM 2: H341, Carc. 2: H351, STOT SE 3: H335, Aquatic 3: H402+H412			
Titanium Dioxide	1-5	13463-67-7	236-675-5
Classifications: Carc. 2: H351			

Hardener (Green Side)

Chemical Name	Weight %	CAS Number	EC Number
Crystalline Silica, Quartz **Classifications:** Carc. 1A: H350, STOT RE 1: H372	20-40	14808-60-7	238-878-4
Polyamido Amine **Classifications:** Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, STOT SE 3: H335	10-30	68953-36-6	273-201-6
2,4,6-tris-(dimethylaminomethyl)phenol **Classifications:** Acute Tox. 4: H302, Skin Irrit. 2: H315, Eye Irrit. 2: H319	1-5	90-72-2	202-013-9
Phenol **Classifications:** Acute Tox. 3: H301+H311+H331, Skin Corr. 1: H314, GCM 2: H341, STOT RE 2: H373	1-5	108-95-2	203-632-7
Benzene-1,3-Dimethaneamine **Classifications:** Acute Tox. 4: H302+H312+H332, Skin Corr. 1: H314, Aquatic 3: H402+H412	1-5	1477-55-0	216-032-5
Tetraethylenepentamine **Classifications:** Acute Tox. 4: H302+H312, Skin Corr. 1: H314, Skin Sens. 1: 317, Aquatic Chronic 2: H411	1-5	112-57-2	203-986-2
Carbon Black **Classifications:** Carc. 2: H351	< 1	1333-86-4	215-609-9

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 immediately.**

Skin Contact: Remove contaminated clothing and product; immediately wash affected area with soap and water. Do not apply greases or ointments. Chemical burns must be treated by a **physician.**

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

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms

Damage to the eyes and skin. Symptoms include burns, redness, itching, tearing, swelling, and blurred vision. Permanent eye damage, including blindness, could result. Rash/dermatitis.

5. Fire-Fighting Measures

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

Additional Information: None known.

Hazards during Fire-Fighting: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F (260°C). Irritating and toxic gases/fumes may be released during a fire. Water run-off can cause environmental damage.

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 by 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

Non-emergency personnel: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep unnecessary personnel away. 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.

Emergency personnel: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protection.

Clean-Up Methods

Small spills (uncured): Wipe up with absorbent material (e.g. cloth, fleece). Place in leak-proof containers. Seal tightly for proper disposal. Clean surface thoroughly to remove residual contamination. If desired, approved solvents, such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. Do NOT use solvents to clean adhesives from skin. Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied.

Large spills (uncured): Stop the flow of material, if this is without risk. Dike far ahead of spill to contain material. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in leak-proof containers. Seal tightly for proper disposal. Following product recovery, flush area with water.

Cured Material: Chip or grind off surface. The product contains components that are considered carcinogenic in respirable form. If you are grinding or cutting cured product, ensure good work practice and use of personal protective equipment as needed to control exposure to respirable dust.

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. Do not inhaled dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Pregnant women should not work with this product if there is risk of exposure. Wash thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Storage

Full Unused Cartridges: Store away from incompatible materials (See Section 10 of the SDS). Keep in original container. Keep container tightly closed. Store in a dry, well-ventilated place out of direct sunlight between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Protect container from physical damage. Keep out of reach of children.

Partially Used Cartridges: To store partially used cartridge, temporarily replace cap or leave hardened nozzle in place. To re-use, attach new nozzle. Do not try to dispense after adhesive hardens in nozzle. CAUTION: Adhesive will start to gel in the nozzle. Adhesive will gel faster at higher temperatures. Material under pressure can blowout the back of the cartridge if the adhesive in the nozzle hardens. Use only an appropriate Simpson Strong-Tie® mixing nozzle in accordance with Simpson Strong-Tie instructions. Modification or improper use of mixing nozzle may impair adhesive performance. Keep out of reach of children.

8. Exposure Controls / Personal Protection

Personal Protective Equipment

Protective Measure: 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: The use of a respirator is not required during normal use of this product. If grinding or cutting cured product or if using in an area without proper ventilation, the use of an approved respirator is recommended.
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 should be used. Ventilation rates should be matched to conditions.
Ready access to running water is required. Provide eyewash station and emergency shower.

Limits

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Quartz (CAS 14808-60-7)	$\frac{10}{\%SiO_2 + 2}$ mg/m^3	0.025 mg/m³ (respirable)	0.05 mg/m³ (respirable)
Phenol* (CAS 108-95-2)	19 mg/m³ 5 ppm	19 mg/m³ 5 ppm	19 mg/m³ 5 ppm

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Benzene-1,3-Dimethaneamine* (CAS 1477-55-0)	0.1 mg/m³ (ceiling)	0.1 mg/m³ (ceiling)	0.1 mg/m³ (ceiling)
Butyl Glycidyl Ether (CAS 2426-08-6)	270 mg/m³ 50 ppm	3 ppm	30 mg/m³ (ceiling) 5.6 ppm (ceiling)
Titanium Dioxide (CAS 13463-67-7)	5 mg/m³ (respirable) 15 mg/m³ (total dust)	10 mg/m³	N/E
Carbon Black (CAS 1333-86-4)	3.5 mg/m³	3 mg/m³	0.1 mg/m³

***Skin Designation:** Material can be absorbed through skin.

9. Physical and Chemical Properties

Property	Resin	Hardener
Physical State:	Liquid, Paste	Liquid, Paste
Color:	White	Dark Green
Odor:	Sweet	Ammonia
pH:	6.9	10.3
Flammability limit – lower %:	No data	No data
Flammability limit – upper %:	No data	No data
Vapor Pressure:	Non-volatile	No data
Vapor Density:	No data	No data
Solubility:	Insoluble in water	Slightly soluble in water
Freezing/Melting Point:	No data	No data
Boiling Point:	> 500 °F (>260 °C)	No data
Flash Point:	250 °F (121 °C) Open Cup	262 °F (128 °C) Closed Cup
Evaporation Rate:	No data	No data
Decomposition Temperature:	No data	No data
Specific Gravity:	1.21 at 72°F (22°C)	1.59 at 72°F (22°C)
VOC (after cure):	3 g/L	3 g/L
Kow:	No data	No data
Viscosity:	No data	No data

10. Stability and Reactivity

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

Hardener (Green 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, peroxides, phenols, and acids.
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:	Corrosive material; causes severe irritation or burns to the gastrointestinal tract and respiratory tract.
Inhalation:	Prolonged inhalation may cause temporary respiratory irritation.
Skin contact:	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact:	Causes severe eye damage.

Symptoms: Burns, redness, itching, tearing, swelling, and blurred vision. Rash/dermatitis. Severe irritation or burns to the gastrointestinal tract and respiratory system.

Information on Toxicological Effects

Acute Effects

Toxicity: Not expected to be acutely toxic.

Component	Species	Test Result
SET-XP Resin		
Acute, *Oral,* LD50	Rat	> 5000
Acute, *Dermal,* LD50	Rabbit	> 2000
SET-XP Hardener		
Acute, *Oral,* LD50	Rat	> 5000
Acute, *Dermal,* LD50	Rabbit	> 2000

Component	Species	Test Result
Bisphenol-A Based Epoxy Resin (CAS 25068-38-6)		
Acute, *Oral,* LD50	Rat	11400 mg/kg
Acute, *Dermal*, LD50	Rabbit	2000 mg/kg
Butyl Glycidyl Ether (CAS 2426-08-6)		
Acute, *Oral,* LD50	Rat	1660 mg/kg
Acute, *Dermal*, LD50	Rat	> 2150 mg/kg
Acute, *Inhalation*, LC50	Rat	> 18.64 mg/l, 4 hours
Titanium Dioxide (CAS 13463-67-7)		
Acute, *Oral,* LD50	Rat	> 10000 mg/kg
Acute, *Inhalation*, LC50	Rat	> 6.82 mg/l
Crystalline Silica, Quartz (CAS 14808-60-7)		
Acute, *Oral,* LD50	Rat	22500 mg/kg
2,4,6-tris-(dimethylaminomethyl)phenol (CAS 90-72-2)		
Acute, *Oral,* LD50	Rat	1200 mg/kg
Acute, *Dermal*, LD50	Rat	1280 mg/kg
Phenol (CAS 108-95-2)		
Acute, *Oral,* LD50	Rat	317 mg/kg
Acute, *Dermal*, LD50	Rabbit	660 mg/kg
Benzene-1,3-Dimethaneamine (CAS 1477-55-0)		
Acute, *Oral,* LD50	Rat	980 mg/kg
Acute, *Dermal*, LD50	Rabbit	2000 mg/kg
Acute, *Inhalation*, LC50	Rat	700 ppm, 1 hour
Tetraethylenepentamine (CAS 112-57-2)		
Acute, *Oral,* LD50	Rat	3990 mg/kg
Carbon Black (CAS 1333-86-4)		
Acute, *Oral,* LD50	Rat	> 8000 mg/kg

Skin corrosion/irritation: Causes severe skin irritation and burns.
Eye damage/eye irritation: Causes serious eye irritation and damage.
Respiratory sensitization: No data available.
Skin sensitization: May cause an allergic skin reaction.
Aspiration hazard: Due to the nature of this product, it is not expected to be an aspiration hazard.
Specific target organ toxicity
Single exposure: No data available.

Chronic Effects

Germ cell mutagenicity: This product contains components that are suspected of causing genetic defects.
Carcinogenicity: Suspected of causing cancer. The product also contains components which are considered carcinogens only in their respirable form. Due to the nature of this product, exposure to respirable particles is likely only when grinding or cutting cured product. Ensure good work practice and use of personal protective equipment as needed to control exposure.

Reproductive toxicity: The available data does not indicate that any ingredients of this product are reproductive toxins.
Specific target organ toxicity
Repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Carcinogen / Reproductive Toxin / Mutagen Information					
Component	**% In Blend (approx.)**	**IARC Monographs**	**NTP**	**ACGIH**	**Other**
Quartz (CAS 14808-60-7)		1	KNOWN	A2	CA65
Titanium Dioxide (CAS 13463-67-7)	< 5	2B	---	---	CA65
Carbon Black (CAS 1333-86-4)	< 1	2B	---	---	CA65
Phenol (CAS 108-95-2)	1-5	3	---	A4	in vitro tests show limited mutagenic properties in human cells
IARC: 1- Carcinogenic 2- Possibly carcinogenic 3 – Not classifiable as to carcinogenicity 4 – Probably not carcinogenic NTP: Known to be human carcinogen or Reasonably anticipated to be a human carcinogen ACGIH – A1 – Confirmed carcinogen A2 – Suspected carcinogen A3 – Animal carcinogen A4 – Not classified A5 – Not suspected CA65 – California Prop 65					

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. SET-XP Resin is classified as toxic to aquatic life with long lasting effects. SET-XP Hardener is not classified as an environmental hazard. Avoid release to the environment.

Supporting Data

Component	Species	Test Result
SET-XP Resin Mixture		
Aquatic Acute, Algae, EC50	Algae	>1000 mg/l, 72 hours
Aquatic Acute, Crustacea, EC50	Daphnia Magna	324.87 mg/l, 48 hours
Aquatic Acute, Fish, LC50	Fish	707.11 mg/l, 96 hours

Component	Species	Test Result
Butyl Glycidyl Ether (CAS 2426-08-6)		
Aquatic, Crustacea, EC50	Daphnia magna	3.9 mg/l, 48 hours
Bisphenol-A Based Epoxy Resin (CAS 25068-38-6)		
Aquatic, Fish, LC50	Fish	1.3 mg/l, 96 hours
Aquatic, Crustacea, EC50	Daphnia magna	2.1 mg/l, 48 hours
Aquatic, Algae, EC50	Algae	> 11 mg/l, 72 hours
Phenol (CAS 108-95-2)		
Aquatic, Fish, LC50	Asiatic knifefish	8-8.25 mg/l, 96 hours
Aquatic, Crustacea, EC50	Daphnia magna	4.2 mg/l, 48 hours
Aquatic, Algae, EC50	Macroalgae	36 mg/l, 72 hours
Benzene-1,3-Dimethaneamine (CAS 1477-55-0)		
Aquatic, Algae, EC50	Algae	12 mg/l, 72 hours
Tetraethylenepentamine (CAS 112-57-2)		
Aquatic, Fish, LC50	Poecilia reticulate	420 mg/l, 96 hours
Aquatic, Crustacea, EC50	Daphnia magna	24 mg/l, 48 hours

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

Chemical	Log Kow	BCF	Bioaccumulation Potential
Butyl Glycidyl Ether (CAS 2426-08-6)	0.63	---	low
BPA Epoxy Resin (CAS 25068-38-6)	2.64-3.78	3-31	low
Phenolic Novolac Resin (CAS 28064-14-4)	3	---	low
Phenol (CAS 108-95-2)	29.5	648	high
Tetraethylenepentamine (CAS 112-57-2)	1.503	---	---

Mobility in soil: This product is non-volatile.

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 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: Chip or grind off surface. Solid material does not need special disposal consideration.

14. Transportation Information

Check limited quantity regulations prior to shipping. SET-XP cartridges may qualify for LQ shipping exemptions.

	Resin (White Side)	Hardener (Green Side)
UN number:	UN3082	UN2735
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-Epichlorohydrin), 9, III, Marine Pollutant	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-Dimethaneamine), 8, II
Precautions:	Marine Pollutant	Corrosive
Required Labels:	9	8
ERG Code (IATA):	9L	8L
EmS (IMDG):	F-A, S-F	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):

1-Butanol (CAS 71-36-3)	LISTED
Phenol (CAS 108-95-2)	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:

Component	CAS	Reportable Quant.	Threshold Planning Quant. Lower Value	Threshold Planning Quant. Upper Value
Phenol	108-95-2	1000	500 lbs	10000 lbs

SARA 311/312 Hazardous chemical: Yes

SARA 313 (TRI reporting):

Chemical Name	CAS Number	% In Blend (approx.)
1-Butanol	71-36-3	< 0.1
Phenol	108-95-2	1-5
Aluminum Oxide	1344-28-1	< 1

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

Carcinogen / Reproductive Toxin / Mutagen Information

Component	% In Blend (approx.)	IARC Monographs	NTP	ACGIH	Other
Quartz (CAS 14808-60-7)	20-40	1	KNOWN	A2	CA65 (Carcinogenic)
Titanium Dioxide (CAS 13463-67-7)	< 5	2B	---	---	CA65 (Carcinogenic)
Carbon Black (CAS 1333-86-4)	< 1	2B	---	---	CA65 (Carcinogenic)

IARC: 1- Carcinogenic 2- Possibly carcinogenic 3 – Not classifiable as to carcinogenicity 4 – Probably not carcinogenic
NTP: Known to be human carcinogen or Reasonably anticipated to be a human carcinogen
ACGIH – A1 – Confirmed carcinogen A2 – Suspected carcinogen A3 – Animal carcinogen A4 – Not classified A5 – Not suspected
CA65 – California Prop 65

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	Maine CHC
Butyl Glycidyl Ether (CAS 2426-08-6)	Listed	Listed	Listed	Listed	
Titanium Dioxide (CAS 13463-67-7)	Listed	Listed	Listed		
Carbon Black (CAS 1333-86-4)	Listed	Listed	Listed		Listed
Phenol (CAS 108-95-2)	Listed	Listed	Listed	Listed	
Benzene-1,3-Dimethaneamine (CAS 1477-55-0)	Listed	Listed	Listed		
Tetraethylenepentamine (CAS 112-57-2)	Listed	Listed	Listed		
Quartz (CAS 14808-60-7)	Listed	Listed	Listed		Listed

Canada

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

International

The product is classified in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

REACH Registered Substances			
Chemical	**CAS Number**	**EC Number**	**Index Number**
Bisphenol-A Based Epoxy Resin	25068-38-6	500-033-5	603-074-00-8
Butyl Glycidyl Ether	2426-08-6	219-376-4	603-039-00-7
Phenol	108-95-2	203-632-7	604-001-00-2
Tetraethylenepentamine	112-57-2	203-986-2	612-060-00-0
2,4,6-tris-(dimethylaminomethyl)phenol	90-72-2	202-013-0-9	603-069-00-0

This product is not subject to or not applicable for any of the following International Regulations; **Stockholm Convention, Rotterdam Convention, Kyoto Protocol, Montreal Protocol, Basel Convention.**

International Inventories

Australia	One or more components of this product are not listed on the Australian Inventory of Chemical Substances (AICS).
Canada	All components of this product are included on the Domestic Substances List (DSL).
China	One or more components of this product are not listed on the Inventory of Existing Chemical Substances in China (IECSC).
Europe	One or more components of this product are not included on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are not exempt from listing.
Japan	One or more components of this product are not listed on the Inventory of Existing and New Chemical Substances (ENCS).
Korea	All components of this product are included on the Existing Chemicals List (ECL).
New Zealand	One or more components of this product have an unknown status on the New Zealand Inventory. Contact Simpson Strong-Tie Environmental Health and Safety if the status of this product on the inventory is desired.
Philippines	One or more components in this product are not listed in the Philippine Inventory of Chemicals and Chemical Substances (PICCS).
United States & Puerto Rico	All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory or are not required to be listed.

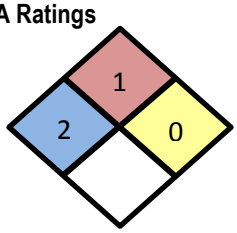
16. Other Information

Date Prepared or Revised: September 2016
Supersedes: December 2014

Contact Simpson Strong-Tie Environmental Health and Safety at EHS@strongtie.com

Additional Resin (White Side) Classifications

NFPA Ratings

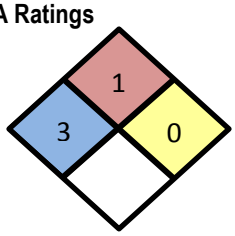


HMIS Rating

HEALTH	2	PHYSICAL	0
FLAMMABILITY	1	PPE	B

Additional Hardener (Green Side) Classifications

NFPA Ratings



HMIS Rating

HEALTH	3	PHYSICAL	0
FLAMMABILITY	1	PPE	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)
HPR:	Hazardous Product Regulations (Canada)
DOT:	Department of Transportation (U.S.)
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals
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)
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

Full Text of H – Phrases Under Section 3

H226:	Flammable liquid and vapor.
H301:	Toxic if swallowed.
H302:	Harmful if swallowed.
H311:	Toxic in contact with skin.
H312:	Harmful in contact with skin.
H314:	Causes severe skin burns and eye damage.
H315:	Causes skin irritation.
H317:	May cause an allergic skin reaction.
H318:	Causes serious eye damage.
H319:	Causes serious eye irritation.
H331:	Toxic if inhaled.
H332:	Harmful if inhaled.
H335:	May cause respiratory irritation.
H341:	Suspected of causing genetic defects.
H350:	May cause cancer.
H351:	Suspected of causing cancer.
H372:	Causes damage to organs through prolonged and repeated exposure.
H373:	May cause damage to organs through prolonged and repeated exposure.
H402:	Harmful to aquatic life.
H411:	Toxic to aquatic life with long lasting effects.
H412:	Harmful to aquatic life with long lasting effects.

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.

Internal

FOR INTERNAL USE ONLY

SET-XP Resin:	SET-XP Hardener:
XCOM3B – 50% Cartridge	XCOM3B – 50% Cartridge
	XCORR – 50% Cartridge