



FIELD-APPLIED COMPOSITE SYSTEMS LLC
925 North Todd Avenue, Azusa, CA 91702 USA
Phone (626) 633-0294 www.facs.llc

SAFETY DATA SHEET

PowerSleeve™ X-Temp-2 Matrix-Part A

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PowerSleeve™ X-Temp-2 Matrix-Part A
MFR'S NAME: Field-Applied Composite Systems LLC, 925 North Todd Avenue, Azusa CA 91702
EMERGENCY PHONE: 800.424.9300 (CHEMTREC) **GENERAL INFORMATION:** 626.633.0294
USE OF THE SUBSTANCE: Epoxy resin for use with fiberglass or carbon fabric for the repair of pipelines or other structures.

SECTION 2: HAZARDS IDENTIFICATION

OSHA/HCS status: No information available.

GHS Label Elements:

Hazard Pictograms:



Signal Word: Warning! Dangerous to the environment.

Hazard Statements and GHS Classifications:

H315, H319	Causes skin and serious eye irritation.	Category 2
H317	May cause an allergic skin reaction.	Category 1
H411	Toxic to aquatic life with long-lasting effects.	Category 2, Chronic
H332	Harmful if inhaled.	Category 4
H312	Harmful if in contact with skin.	Category 4
H302	Harmful if swallowed.	Category 4

Precautionary Statements:

Prevention: P261: Avoid breathing fumes, mist, vapors and spray.
 P264: Wash hands thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective gloves, clothing, and eye/face protection.

Responses: P301+P312: IF SWALLOWED: Call POISON CENTER and/or get medical assistance if you feel unwell.
 P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 P333+P313: If skin irritation or rash occurs, get medical attention.
 P362+P364: Take off contaminated clothing and wash it 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.

P337+P313: If eye irritation persists, get medical attention.
P391: Collect spillage.

Storage: P403+P233: Store in a well-ventilated place. Keep containers tightly closed.
P405: Store in a secure area.

Disposal: P501: Dispose of contents and containers in accordance with all local, regional and international regulations.

Other Hazards: None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Ingredient	% by WT	CAS #	67/548/EEC	Regulation (EC) 1272/2008 (CLP)
Bisphenol-A Epoxy Resin	30-45	25068-38-6 (US) 25085-99-8 (EC)	No Data Available.	No Data Available.
Epoxy Phenol Novolac Resin	40-65	28064-14-4		
Aliphatic Epoxy Resin	5-15	2425-79-8		

Occupational Exposure Limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES

Description of necessary first aid measures:

General	Get medical attention immediately for any person who is having trouble or not breathing, or any unconscious person. Provide oxygen or artificial respiration to a person if they have trouble breathing. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Place an unconscious person in a recovery position, maintain an open airway and loosen tight clothing.
Inhalation	Remove victim to fresh air and keep warm and at rest in a position comfortable for breathing. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin Contact	Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention if symptoms occur.
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids and roll eyes in a circular motion. Check for and remove any contact lenses if easy to do. Continue to rinse for at least 15 minutes. Get medical attention.
Ingestion	Wash out mouth with water. Remove dentures, if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. DO NOT induce vomiting. Get medical attention.

Most Important Symptoms/Effects, Acute and Long –Term:

Potential Acute Health Effects:

Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed after exposure. Harmful if inhaled in high airborne concentrations.
Skin Contact	Causes skin irritation. May cause an allergic skin irritation. Pre-existing skin problems may be aggravated.
Eye Contact	Irritating and may cause redness and pain.

Ingestion May cause discomfort if swallowed.

Overexposure Signs/Symptoms:

Inhalation No specific data.

Skin Contact Adverse symptoms may include the following: Irritation and/or Redness.

Eye Contact Adverse symptoms may include the following: Pain or Irritation. Watering. Redness.

Ingestion No specific data.

Indication of Immediate Medical Attention and/or Special Treatment needed:

Notes to Physician Treat symptomatically. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be under medical surveillance for up to 48 hours.

Specific Treatments No specific treatment(s).

See also Toxicological Information in **Section 11**.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media Dry chemicals, water spray, foam or carbon dioxide. Spray containers with water to keep cool and avoid rupture due to pressure buildup.

Unsuitable Media None known.

Specific Hazards Material is not considered a fire hazard but will burn if ignited.

National Fire Protection Association (USA):

Labeling: No data available.

Hazardous Thermal Decomposition Products

Irritating or toxic substances may be emitted upon burning or decomposition. See **Section 10** for additional information.

Special Protective Actions for Fire Fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special Protective Equipment for Fire Fighters

Fire Fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode during the attack phase of firefighting operations. During cleanup, if area is poorly ventilated, SCBA should be used. See **Section 9** for additional information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Keep unauthorized persons away. Provide adequate ventilation and avoid breathing vapors. Put on appropriate personal protective equipment (see **Section 8**). If spilled in an enclosed area, ventilate area or use SCBA. Remove potential ignition sources.

Environmental Precautions

Avoid dispersal of material and runoff from contact with soil, waterways, drains and/or sewers.

Methods and Materials for Containment and Cleaning Up (Small or Large Spill)

Stop leak if possible without risk. Move containers from spill area. Absorb spilled material with vermiculite, dry sand or earth, put into closed containers, store in a safe location and dispose of via a licensed waste disposal contractor. Do not allow water runoff into sewers or water sources

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling/Personal Hygiene

Use good laboratory/workplace procedures. Use appropriate personal protective equipment as per **Section 8**. Keep in the original container or an approved alternative; keep containers tightly closed when not in use.

Keep away from heat, sparks and open flame. Eating, drinking and/or smoking should be prohibited where this material is being used. Workers should remove contaminated clothing/protective equipment and wash hands and face and before entering eating areas and eating, drinking and/or smoking.

Conditions for Safe Storage, including any Incompatibilities

Keep away from heat, sparks and open flames. Store in sealed original containers, or approved alternatives, when not in use in a dry, well-ventilated area. Protect containers from direct sunlight. Do not allow to freeze or exceed 40°C (~110°F). Do not reuse containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits

Ingredient	CAS#	Exposure Limits (ACGIH-TWA or ACGIH-STEL)
Bisphenol A Epoxy Resin	25068-38-6 (US)	Not Available
	25085-99-8 (EC)	
Epoxy Phenol Novolac Resin	26064-14-4	
Aliphatic Epoxy Resin	2425-79-8	

Appropriate Engineering Controls

Good general ventilation should be sufficient to control worker exposure to any airborne contaminants. If working in enclosed spaces, provide additional local ventilation. Eyewash fountains and safety showers are recommended, as well as good laboratory/shop procedures and care.

Exposure controls

Respiratory Protection

If necessary, a properly-fitted vapor mask/respirator (organic vapor respirator) or SCBA should be used.

Hand Protection

Impervious, chemical-resistant gloves (such as nitrile rubber PVC, etc. of .35mm thickness or similar) should be worn when handling this material. Contaminated gloves should be disposed of properly.

Body Protection

Chemically resistant long-sleeved shirts and long pants or lab coats are recommended. Contaminated clothing should be washed separately from other clothes before reuse. Footwear appropriate for the work being performed should be worn and cleaned carefully if contaminated, before reuse. Heavily contaminated clothing or footwear should be disposed of properly.

Eye/Face Protection

Safety eyewear and face shields appropriate for the work being performed should be used. Ordinarily, this means a minimum of safety eyewear or splash goggles.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Viscous liquid	Color:	Clear amber
Odor:	Mild	Odor Threshold:	N/A
pH	N/A	Melting Point:	N/A
Boiling Point:	>200°C (424°F)	Flash Point:	>110°C (~250°F)
Evaporation Rate:	N/A	Vapor Pressure/Density:	<1mm Hg at 20°C Heavier than air.
Relative Density	1.18	Viscosity:	19,000 cP at 25°C
Auto-Ignition Temp.	N/A	Decomposition Temp.	>200°C
Solubility:	Negligible.	VOC Content:	N/A-none.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Exothermic reactions including polymerization may occur in contact with amines, strong acids or bases, alcohols, strong oxidizing agents and excessive heat.

Chemical Stability: This product is stable under normal conditions.

Possibility of Hazardous Reactions: See "Reactivity" above for cautions.

Conditions to Avoid: Excessive heat and ignition sources.

Incompatible Materials: Strong acids, bases, oxidizing agents, alcohols and amines.

Hazardous Decomposition Products: Thermal decomposition may produce smoke, oxides of carbon, aldehydes, phenolics and other products of incomplete combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity

Product/Ingredient	LC ₅₀ Inhalation	LD ₅₀ Oral (Rat)	LD ₅₀ Dermal (Rabbit)
Bisphenol-A Epoxy Resin	N/A	>2,000mg/kg	>2,000 mg/kg
Epoxy Phenol Novolac Resin	N/A	>2,000mg/kg	>2,000mg/kg
Aliphatic Epoxy Resin	>250 ppm (6 hours)	1,134 mg/kg	1,130 mg/kg

Skin Corrosion/Irritation: Skin Irritation-Category 2

Serious Eye Damage/Irritation: Eye Irritation-Category 2

Respiratory or Skin Sensitization: Skin Sensitization-Category 1

Mutagenicity: No specific data. **Carcinogenicity:** No specific data.

Reproductive Toxicity: No specific data. **Teratogenicity:** No specific data.

Aspiration Hazard: No specific data.

Specific Target Organ Toxicity (Single and Repeated Exposure): No specific data.

Information on the Likely Routes of Exposure: Eyes, skin, inhalation and ingestion.

Potential Acute Health Effects and Related Symptoms:

See **Section 4**.

Delayed, immediate and chronic effects from short and long term exposure:

Some persons may become sensitized after chronic exposure and may exhibit moderate to severe allergic reactions when exposed.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity, Persistence and Degradability:

Product/Ingredient	LC ₅₀ 96 Hours (Fish)	EC ₅₀ 24 Hours (Daphnia)	IC ₅₀ 96 Hours (Bacteria)	Biodegradability
Bisphenol-A Epoxy Resin	2.4 mg/L	3.6 mg/L	>100 mg/L	Not
Epoxy Phenol Novolac Resin	>1-10 mg/L	>1-10 mg/L	N/A	Readily
Aliphatic Epoxy Resin	24 mg/L	75 mg/L	N/A	Biodegradable

Bioaccumulative Potential:

Ingredient	LogPow	BCF	Potential
Bisphenol-A Epoxy Resin	3.242	31	Low
Epoxy Phenol Novolac Resin	N/A	N/A	N/A
Aliphatic Epoxy Resin	-0.15	N/A	N/A

Mobility in Soil (soil/water partition coefficient-K_{oc}):

Bisphenol A Epoxy Resin: 445.
No specific data for other ingredients.

Other Adverse Effects: Other information is not available. No information is available regarding classification of materials as PBT or vPvB.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See **Section 8** for recommendations on the use of personal protective equipment.

SECTION 14: TRANSPORTATION INFORMATION

UN No's: DOT/TG: UN3082 IMDG: 3082 ICAO: 3082

DOT/TDG Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)

Hazard Classes: DOT: Not Regulated. TDG: Not Regulated. IMDG: 9 ICAO: 9

Hazard Labels: DOT: N/A TDG: N/A

Pack Groups: DOT: N/A IMDG: III AIR: III

Environmental Hazards: Marine Pollutant: Yes **Hazardous Substance (USA):** No.

Transporting in Bulk according to Annex II of MARPOL 73/78 and the IBC Code: No specific data.

Surface Shipment within the US: Not regulated.

Label for Conveyance: (Not for DOT or TDG surface-Air and Marine ONLY)



Other Information: Not regulated for shipment within the United States.

SECTION 15: REGULATORY INFORMATION**INTERNATIONAL REGULATIONS:****International and US Inventory Lists**

Canada Inventory (DSL)	All components listed or exempt.	EU-ELINCS	Not listed.*
Canada Inventory (NDSL)	Not listed.*	EU-EINECS	Listed or Exempt
US Toxic Substances Control Act (TSCA)	All components listed or exempt.	REACH, Annex XIV and Annex XVII	Not listed*
Other	Not determined, no additional information is available.		

***Note:** There is no listing on the public inventory, no information is available or the component has not been reviewed.

Substances of Very High Concern: No information is available.

Other Information: Material is not listed as a CA Prop 65 chemical, and has no reportable quantity listings.

SECTION 16: OTHER INFORMATION**ABBREVIATIONS:**

ACGIH: American Conference of Governmental Industrial Hygienists
ADR/RID: European dangerous goods transport, road and rail, regulations
CAS: Chemical Abstract Service Registry
DOT: Department of Transportation (U.S.)
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods code
OEL: Occupational Exposure Limits
OSHA: Occupational Safety and Health Administration (U.S.)
PEL: Permissible Exposure Limit
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit (15 minute Time Weighted Average)
TDG: Canadian Transportation of Dangerous Goods Act and Regulations
TPQ: Threshold Planning Quantity
RQ: Reportable Quantity
UN: United Nations
U.S.: United States
N/A: Not available or not applicable.

Revision Date: January 30, 2024

Revision: 0

Reason for Revision: N/A

Notice:

The information contained herein is provided is correct to the best of our knowledge, information and belief at the date of publication. However, Field-Applied Composite Systems LLC makes no representation as to its completeness and accuracy. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. This information is not to be considered a warranty or quality specification. Since the conditions of handling and use are beyond FACS's control, we make no guarantee of results and assume no liability for damages incurred by use of this material. This information relates only to the specific material designated and may not be valid if used in combination with any other materials or in any process not specified in the text. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

END OF SDS