



AIR LOGISTICS CORPORATION – F.A.C.S. Group
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SAFETY DATA SHEET

PowerSleeve™ 439 Matrix-Part A

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PowerSleeve™ 439 Matrix-Part A
MFR'S NAME: Air Logistics Corporation, 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
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OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label Elements:
Hazard Pictograms:



Signal Word: Warning! Dangerous to the environment.

Hazard Statements and GHS Classifications:

H315, H319	Causes skin and 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 doctor 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 secured area.

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

Other Hazards: None known. No Physical or Chemical Hazards classified under GHS.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

CHEMICAL NAME	CAS NUMBER	CONTENT
Bisphenol-A Epoxy Resin	25068-38-6	50-80%
Epoxy Phenol Novolac Resin	28064-14-4	10-30%
Aliphatic Epoxy Resin	2425-79-8	10-30%

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

SECTION 4: FIRST AID MEASURES

Description of necessary first aid measures:

Inhalation	Remove victim to fresh air, and keep warm and at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration, or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position, and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband. 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. Check for, and remove any contact lenses. 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. If unconscious, place in recovery position, and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

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.
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: FIREFIGHTING 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 Firefighters

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 Firefighters

Firefighters 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.

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 in an unmixed condition. When this material is mixed with the proper ratio of Hardener (Part B) and is fully cured, the resulting solid is non-hazardous.

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 and put into containers and dispose of via a licensed waste disposal contractor. Clean spillage area with solvents or plenty of water. Do not allow runoff into sewers or water sources

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling/Personal Hygiene

Use appropriate personal protective equipment as per **Section 8**. Keep in the original containers or an approved alternative; keep containers tightly closed when not in use. Do not reuse containers.

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

Store in sealed original containers, or approved alternatives, when not in use in a dry, well-ventilated area. Protect containers from direct sunlight in a dry, cool and well ventilated area. 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
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 procedures and care.

Exposure controls

Respiratory Protection

If necessary, a properly-fitted vapor mask/respirator complying with an approved standard or SCBA should be used.

Hand Protection

Chemical-resistant gloves (such as nitrile rubber 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 soiled clothing or shoes should be discarded.

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:	Liquid	Color:	Clear amber
Odor:	Mild	Odor Threshold:	N/A
pH	N/A	Melting Point:	N/A
Boiling Point:	N/A	Flash Point:	>110°C (~250°F)
Evaporation Rate:	N/A	Vapor Pressure/Density:	<1mm Hg at 20°C Heavier than air
Relative Density	1.16	Viscosity:	3,000 cP at 25°C
Auto-Ignition Temp.	N/A	Decomposition Temp.	N/A
Solubility:	Negligible	VOC Content:	None

SECTION 10: STABILITY AND REACTIVITY

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

Chemical Stability: This product is stable under normal conditions.

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

Conditions to Avoid: Avoid excessive heat and ignition sources.

Incompatible Materials: Strong acids, bases, oxidizing agents 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

Chemical Name	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:

Chemical Name	LC ₅₀ 96 Hours (Fish)	EC ₅₀ 24 Hours (Daphnia)	IC ₅₀ 96 Hours (Bacteria)
Bisphenol-A Epoxy Resin	2.4 mg/L	3.6 mg/L	>100 mg/L
Epoxy Phenol Novolac Resin	>1-10 mg/L	>1-10 mg/L	N/A
Aliphatic Epoxy Resin	24 mg/L	75 mg/L	N/A

Persistence and Degradability:

Chemical Name: OECD derived from OECD 301F (Biodegradation Test)-28 Days

Bisphenol-A Epoxy Resin 5%-not readily biodegradable.

Epoxy Phenol Novolac Resin Not readily biodegradable.

Aliphatic Epoxy Resin Not readily biodegradable.

Bioaccumulative Potential:

Chemical Name	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. Mobility is expected to be low.
N/A for other chemicals.

Other Adverse Effects: Other information is not available. No information is available for classification 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. When combined with the proper ratio of hardener (Part B), mixed and allowed to cure, the resulting solid is non-hazardous.

SECTION 14: TRANSPORTATION INFORMATION

UN No's: DOT/TG: Not regulated. IMDG: 3082 ICAO: 3082

IMDG/ICAO Proper Shipping Name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin) (Air and marine shipments only)

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

Hazard Labels: DOT/TDG: N/A-not regulated

Pack Groups: DOT/TDG: N/A-not regulated. IMDG: III AIR: III

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

Transporting in Bulk according to Annex II of MARPOL73/78 and the IBC Code: N/A

Label for Conveyance: AIR AND MARINE SHIPMENTS ONLY.

**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: None of the components are listed.

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
RQ: Reportable Quantity
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit (15 minute Time Weighted Average)
TDG: Canadian Transportation of Dangerous Goods Act and Regulations
UN: United Nations
U.S.: United States

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