

SAFETY DATA SHEET

1.0 IDENTIFICATION

- 1.1 **GHS product identifier:** ARMOR-FLEX MEMBRANE, Part A
- 1.2 **Other means of identification:** Epoxy Resin
- 1.3 **Recommended use of the chemical and restrictions on use:** N/A
- 1.4 **Supplier's details:** VANBERG SPECIALIZED COATINGS
PO BOX 19414
LENEXA, KS 66285
INFORMATION PHONE NUMBER: 800-874-0631
- 1.5 **Emergency phone number:** 1-800-255-3924

2.0 HAZARDS IDENTIFICATION

- 2.1 **Classification of the substance or mixture:**
Skin Corrosion/Irritation 2, Eye Damage/Irritation 2B, Acute Toxicity – Oral 4
- 2.2 **GHS label elements:**



Signal Word: Warning

Hazard Statement: Causes skin irritation

Prevention: Wash hands thoroughly after handling. Wear protective gloves.

Response: If on skin: wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before reuse.



Signal Word: Warning

Hazard Statement: Causes eye irritation

Prevention: Flush eyes thoroughly after eye contact.

Response: 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.



Signal Word: Warning

Hazard Statement: Harmful if swallowed

Prevention: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth.

Disposal: Dispose of in accordance with federal, state, and local regulations.

- 2.3 **Other hazards which do not result in classification:** N/A
- 2.4 **Hazards Material Information System (United States):**

Health	2
Flammability	1
Physical Hazard	1

Hazard Codes: Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4=Severe Hazard

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Chemical Identity	CAS No.	Concentration
Reaction products of epichlorohydrin and bisphenol A	025085-99-8	80-100%
Glycidyl neodeconate	26761-45-5	1-10%

4.0 FIRST-AID MEASURES

4.1 Description of necessary first-aid measures:

Eye Contact: Remove contact lenses at once. Immediately flush eyes with large amounts of water or normal saline for at least 30 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Prompt medical attention is essential.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

Inhalation: Remove to fresh air if effects occur. If not breathing, give artificial respiration. Get immediate medical attention.

Ingestion: Do not induce vomiting. If patient is conscious and can swallow, give two glasses of water (16 oz.). Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

4.2 Most Important symptoms/effects, acute and delayed:

Signs and Symptoms: Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives.

Aggravated Medical Conditions: Preexisting skin and eye disorders may be aggravated by exposure to this product. Preexisting skin and lung allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

Other Health Effects: Based on animal studies, repeated exposure to components of this product may cause damage to liver, kidney, and respiratory systems. Reports have associated repeated and prolonged occupational exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Note to Physician: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Contact a poison control center for additional treatment information. Ingestion of large quantities (1% of diet) of Component 2 produced body weight changes in experimental animals and in the liver and kidney. Levels of 0.5% and 1.0% wt in the diet also caused blood changes and reduced erythrocyte count and hematocrit.

5.0 FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media: Use alcohol type foam, dry chemical, or CO₂.

5.2 Specific hazards arising from the chemical: None known. Flash Point: 265 °F.

5.3 Special protective actions for fire-fighters: Use water spray to cool fire exposed surfaces and to protect personnel. If a leak or spill has not ignited, use water spray to disperse the vapors. Contain the runoff stream. Try to cover liquid spills with foam. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves, and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Ventilate the area. Avoid breathing vapor. Use self-contained breathing apparatus or supplied air for large spills or confined areas.

6.2 Methods and materials for containment and clean up: Contain spill if possible. Wipe up or absorb on suitable material and pick up with shovels. Do not use sawdust, wood chips, or other cellulosic materials to absorb the spill. Prevent entry into sewers and waterways. Dispose of in accordance with federal, state, and local regulations.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling: Ground all transfer equipment. Take precautionary measures against static discharge. Handle as an industrial chemical.

7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly closed when not in use. Practice good caution and personal cleanliness to avoid skin and eye contact. Hold bulk storage under nitrogen blanket. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component	CAS No.	Percent	Exposure Limits	Source
Reaction products of epichlorohydrin and bisphenol A	025085-99-8	80-100%	None Established	N/A
Glycidyl Neodeconate	26761-45-5	1-10%	None Established	N/A

8.2 Appropriate engineering controls: N/A

8.3 Individual protection measures, such as personal protective equipment:

Respiratory Protection: Provide adequate ventilation. Avoid breathing of vapors or mists. Airborne concentrations should be kept to lowest levels possible. When exposures are not adequately controlled, use an approved respirator. Selection of air-purifying or positive-pressure supplied air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Protective Clothing: Protective clothing such as uniforms, coveralls, or lab coats must be worn. Launder or dry-clean when soiled. Gloves and goggles resistant to chemicals and petroleum distillates required. When handling large quantities, impervious suits, gloves, and rubber boots must be worn.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Appearance (physical state, color, etc.):** Clear, water white, viscous liquid
- 9.2 Odor:** Mild epoxy odor
- 9.3 Odor threshold:** N/A
- 9.4 pH:** Not determined.
- 9.5 Melting point/freezing point:** N/A
- 9.6 Initial boiling point and boiling range:** >500 °F
- 9.7 Flash Point:** 265° F
- 9.8 Evaporation rate:** Not established
- 9.9 Flammability (solid, gas):** N/A
- 9.10 Upper/lower flammability or explosive limits:** LEL = N/A UEL = N/A
- 9.11 Vapor pressure:** Not established
- 9.12 Vapor Density:** N/A
- 9.13 Relative density (specific gravity):** 1.147
- 9.14 Solubility(ies):** Not soluble (in water)
- 9.15 Partition coefficient; n-octanol/water:** N/A
- 9.16 Auto-ignition temperature:** N/A
- 9.17 Decomposition temperature:** N/A
- 9.18 Viscosity:** N/A

10.0 STABILITY AND REACTIVITY

- 10.1 Reactivity:** N/A
- 10.2 Chemical stability:** Excess heating over long periods of time degrades the resin.
- 10.3 Possibility of hazardous reactions:** Will not occur by itself, but masses of more than 1 pound of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
- 10.4 Conditions to avoid:** Avoid exposure to heat, light, flame, or other sources of ignition.
- 10.5 Incompatible materials:** Can react vigorously with strong oxidizing agents, strong lewis or mineral acids, and strong mineral and organic bases/especially primary and secondary amines. Reaction with some curing agents may produce considerable heat.
- 10.6 Hazardous decomposition products:** Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, aldehydes, acids, phenolics, water, and hydrocarbon fragments.

11.0 TOXICOLOGICAL INFORMATION

- 11.1 Likely routes of exposure:** N/A
- 11.2 Symptoms related to the physical, chemical and toxicological characteristics:**
Eye Contact: Irritating and will injure eye tissue if not removed promptly.
Skin Contact: May cause severe irritation. Has been known to cause allergic skin reaction in humans.
Inhalation: High vapor concentrations are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects.
Ingestion: Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.
- 11.3 Delayed and immediate effects and also chronic effects from short and long term exposure:** N/A
- 11.4 Numerical measures of toxicity:**

Ingredient Name	CAS No.	%	Acute Oral LD50	Acute Dermal LD50	Acute Inhalation LC50
Reaction products of epichlorohydrin and bisphenol A	025085-99-8	80-100%	> 5.0 g/kg	20.0 g/kg (rabbit)	Not available
Glycidyl Neodeconate	26761-45-5	1-10%	9.6 g/kg (rat)	38.0 g/kg (rat)	Not available

12.0 ECOLOGICAL INFORMATION

- 12.1 **Ecotoxicity:** N/A
- 12.2 **Persistence and degradability:** N/A
- 12.3 **Bioaccumulative potential:** N/A
- 12.4 **Mobility in soil:** N/A
- 12.5 **Other adverse effects:** N/A

13.0 DISPOSAL CONSIDERATIONS

- 13.1 **Disposal methods:** Dispose of in accordance with federal, state, and local regulations.

14.0 TRANSPORT INFORMATION

- 14.1 **UN number:** Not regulated
- 14.2 **UN proper shipping name:** N/A
- 14.3 **Transport hazard class(es):** N/A
- 14.4 **Packing group, if applicable:** N/A
- 14.5 **Environmental hazards:** N/A
- 14.6 **Transport in bulk:** N/A
- 14.7 **Special precautions for user:** N/A

15.0 REGULATORY INFORMATION**15.1 Safety, health and environmental regulations:**

Not meant to be all-inclusive. Selected regulations presented.

- A. SARA Title III Section 311/312 hazards:** Immediate health
- B. WHMIS Classification:** Classes D2B
- C. TSCA Status:** listed on TSCA Inventory
- D. OSHA Hazard Comm. Std.:** See Section 2

CA = California Haz. Subst. List; CA65 = California Safe Drinking Water and Toxics Enforcement Act List; CT = Connecticut Tox. Subst. List; FL = Florida Subst. List; IL = Illinois Tox. Subst. List; LA = Louisiana Haz. Subst. List; MA = Massachusetts Subst. List; ME = Maine Haz. Subst. List; MN = Minnesota Haz. Subst. List; NJ = New Jersey Haz. Subst. List; PA = Pennsylvania Haz. Subst. List; RI = Rhode Island Haz. Subst. List.

16.0 OTHER INFORMATION

- 16.1 **Date of Preparation:** 5/28/2015

To the best of our knowledge, the information contained herein is accurate. Final determination of the suitability of any material is the sole responsibility of the users. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.