



Armorcoat Supra Part B Hardener

SECTION 1 – IDENTIFICATION

GHS product identifier: Armorcoat Supra Part B, Hardener
Other means of identification: Epoxy Curing Agent
Recommended use of the chemical and restrictions on use: N/A
Supplier's details: VANBERG SPECIALIZED COATINGS
10705 COTTONWOOD ST.
LENEXA, KS 66215
INFORMATION PHONE NUMBER: 913-599-5939
Emergency phone number: 1-800-255-3924

SECTION 2 – HAZARDS IDENTIFICATION

Classification of the substance or mixture:
Skin Corrosion/Irritation 2, Eye Damage/Irritation 2B, Acute Toxicity – Oral 4, Acute Toxicity – Inhalation 4

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.



Signal Word: Warning
Hazard Statement: Harmful if inhaled.
Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well ventilated area.
Response: If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Other hazards which do not result in classification
NA

Hazards Material Information System (United States):

Health	2
Flammability	0
Physical Hazard	0

Hazard Codes: 0=Minimal Hazard, 1=Slight Hazard, 2=Moderate Hazard, 3=Serious Hazard, 4= Severe Hazard

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Hazardous Components (Chemical Name)	CAS #	Concentration
Polyethylene polyamine adduct	N/A	40-50%
2-propoxyethanol	2807-30-9	<5%
Acetic acid	64-19-7	<2%
Water	7732-18-5	40-50%
Crystalline silica	14808-60-7	1-10%

SECTION 4 – FIRST AID MEASURES

Description of necessary first-aid measures:

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

Skin Contact:

Immediately remove contaminated clothing or shoes; wipe excess from skin and flush with plenty of water for at least 15 minutes. Use soap if available or follow by washing with soap and water. Do not reuse clothing until thoroughly cleaned. Get medical attention. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse.

Inhalation:

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Ingestion:

Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Most Important symptoms/effects, acute and delayed:

Signs and Symptoms:

Irritation as noted above. Skin sensitization (allergy) may be evidenced by rashes, especially hives. Respiratory tract sensitization (e.g., allergy, asthma) may be evidenced by wheezing with shortness of breath and cough. Damage to blood forming organs may be evidenced by easy fatigability and pallor (RBC effect). Damage to blood forming organs may be evidenced by decreased resistance to infection (WBC effect). Damage to blood forming organs may be evidenced by excessive bruising and bleeding (platelet effect).

Aggravated Medical Conditions:

Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Preexisting skin and respiratory tract allergies may increase the chance of developing increased allergy symptoms from exposure to this product.

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

Component 1:

It has generally been observed that aliphatic amines can cause changes in the lungs, liver, kidneys, and heart.

Component 2:

In male and female rats exposed to greater or equal to 400 ppm vapor concentration of 2-propoxyethanol (2PE), toxic effects on the red blood cells (RBCs) with secondary effects on the spleen and transient hemoglobinuria were observed. The NOEL in this study was 200 ppm. In pregnant rats exposed to 100 ppm to 400 ppm vapor concentration of 2-PE, no teratogenic or significant embryo/fetotoxicity was observed at all dose levels due to toxic effects on the RBCs.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media: Use water fog, "Alcohol" Foam, Dry Chemical or CO2

Specific hazards arising from the chemical:

Flash point is N/A. Containers exposed to heat from fires should be cooled with water to prevent vapor pressure which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

Special protective actions for fire-fighters:

Material will not burn unless preheated. 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. Cool fire exposed containers with water. Use water spray, dry chemical, foam, or carbon dioxide. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Specific hazards arising from the chemical:

Flash point is 210 °F . Toxic vapors (hydrogen cyanide) may be formed. hazardous combustion products may include intense heat, dense black smoke, carbon monoxide, carbon dioxide, and hydrocarbon fragments.

Special protective actions for fire-fighters:

Use a positive pressure self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respirator and protective clothing as appropriate.

Methods and materials for containment and clean up:

May burn although not readily ignitable. Use cautious judgment when cleaning up large spills. Large spills: Shut off source of leak if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; dispose of properly. Flush area with water to remove trace residue. Small spills: Take up with an absorbent material and dispose of properly.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling:

Wear respirator and protective clothing as appropriate.

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.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

N/A

Component	CAS No.	Percent	Exposure Limits	Source
Polyethylene polyamine adduct	N/A	40-50	None established	
2-propoxyethanol	2807-30-9	<5	25 ppm	Other
Acetic acid	64-19-7	<2	10 ppm PEL/TWA, TLV/TWA 15 ppm TLV/STEL	OSHA ACGIH
Crystalline silica	14808-60-7	1-10	0.1 mg/m ³ (respirable dust), PEL/TWA, TLV/TWA	OSHA ACGIH

Appropriate engineering controls: N/A

Individual protection measures, such as personal protective equipment:**Respiratory Protection:**

Avoid prolonged or repeated breathing of vapors or mists. If exposure may or does exceed occupational exposure limits (sec. IV) use a NIOSH-approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

Protective Clothing:

Avoid contact with eyes. Wear chemical goggles if there is likelihood of contact with eyes. Avoid prolonged or repeated contact with skin. Wear chemical resistant gloves and other clothing as required to minimize contact.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Opaque Colored Viscous Liquid

Odor: Ammonia and Solvent Odor.

Odor threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Initial boiling point and boiling range: 212-301

Flash Point: N/A

Evaporation rate: <1

Flammability (solid, gas): N/A

Upper/lower flammability or explosive limits: N/A

Vapor pressure: <20

Vapor Density: >1

Relative density (specific gravity): 1.08

Solubility(ies): miscible

Partition coefficient; n-octanol/water: N/A

Auto-ignition temperature: N/A

Decomposition temperature: N/A

Viscosity: N/A

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:

N/A

Chemical stability:

Stable

Possibility of hazardous reactions:

Will not occur

Conditions to avoid:

Avoid heat and flames. Can react vigorously with strong oxidizing agents, strong lewis or mineral acids, and strong mineral and organic bases/especially primary and secondary aliphatic amines. Reaction with some curing agents may produce considerable heat.

Incompatible materials:

N/A

Hazardous decomposition products:

Carbon monoxide, aldehydes, acids and other organic compounds may be formed during combustion.

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely routes of exposure: N/A

Symptoms related to the physical, chemical and toxicological characteristics:

Eye Contact:

Product may be severely irritating to the eyes. May cause corneal damage.

Skin Contact:

Product may be moderately irritating to the skin. Product may be toxic and may be harmful if absorbed through the skin. May produce damage to red blood cells. May cause skin sensitization.

Inhalation:

Product may cause irritation to the nose, throat and respiratory tract. Product may be toxic if inhaled; may produce damage to red blood cells. May cause respiratory tract sensitization.

Ingestion:

Product may be moderately toxic and may be harmful if swallowed; may produce damage to red blood cells.

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

N/A

Numerical measures of toxicity:

INGREDIENT NAME	CAS #	%	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
Polyethylene polyamine adduct	N/A	40-50	no data available	no data available	no data available
2-propoxyethanol	2807-30-9	<5	301 g/kg (rat)	870 mg/kg (rabbit)	>2000 PPM/6h (rat)
Acetic acid	64-19-7	<2	3.31 g/kg (rat)	1.06 g/kg (rabbit)	5620/1h (rat)
Crystalline silica	14808-60-7	1-10	no data available	no data available	no data available

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:

N/A

Persistence and degradability:

N/A

Bioaccumulative potential:

N/A

Mobility in soil:

N/A

Other adverse effects:

N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal methods:

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

SECTION 14 – TRANSPORTATION INFORMATION

Not Regulated

UN number:

N/A

UN proper shipping name:

N/A

Transport hazard class(es):

N/A

Packing group, if applicable:

N/A

Environmental hazards:

N/A

Transport in bulk:

N/A

Special precautions for user:

N/A

SECTION 15 – REGULATORY INFORMATION

Safety, health and environmental regulations:

Not meant to be all-inclusive. Selected regulations presented. The components of this product are listed on the EPA/TSCA Inventory of chemical substances. Protection of stratospheric ozone (pursuant to Section 611 of the Clean Air Act Amendments of 1990): per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances. In accordance with SARA Title III, Section 313, the attached environmental data sheet (EDS) should always be copied and sent with the MSDS.

SARA Title III Section 311/312 hazards: Immediate health hazard, delayed health hazard

WHMIS Classification:

TSCA Status: Listed on TSCA inventory

OSHA Hazard Comm. Std.: See Section 2

The following chemicals are specifically listed by individual states. Other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>State listed Component</u>	<u>Percent</u>	<u>State Code</u>
Acetic acid (CAS No: 64-19-7)	<2%	CA, CT, FL, IL, MA, ME, MN, NJ, PA, RI

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.

SECTION 16 – OTHER INFORMATION

Date of Preparation: 11/17/16

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.