

ERGON ARMOR

Novocoat R3910 A
MSDS No. EA084

Revision No. 1
March 18, 2010

Section 1 – Chemical Product and Company Information

Product/Chemical Name:	Novocoat R3910 A
Chemical Formula:	NA
CAS Number:	NA
Other Designations:	Epoxy Resin
General Use:	Coatings
Manufacturer:	Ergon Armor; P O Box 1639; Jackson MS 39215-1639; Phone 601-933-3000; Hours of Operation 8:00 am – 5:00 pm; ERGON 24 Hour Emergency Phone Number 1-800-222-7122; CHEMTREC 1-800-424-9300.

Section 2 – Composition / Information on Ingredients

Ingredient Name	CAS Number	% Volume
Bisphenol A (Epichlorhydrin)	25068-38-6	10 - 20
Phenol/formaldehyde/glycidyl ether, polymer	28064-14-4	10 - 20
Mineral Filler	Mixture	40 – 60
<i>Contains Crystalline Silica (Quartz)</i>	<i>14808-60-7</i>	<i>11%</i>

INGREDIENT	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDHL
	TWA	STEL	TWA	STEL	TWA	STEL	
Bisphenol A (Epichlorhydrin)	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Phenol/formaldehyde/glycidyl ether, polymer	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Crystalline Silica as quartz	10 mg/m ³ / (%SiO ₂ +2) (respirable, Table Z-3)	None estab.	0.025 mg/m ³ (respirable)	None estab.	0.05 mg/m ³ (respirable)	None estab.	50 mg/m ³

Section 3 – Hazards Information

EMERGENCY OVERVIEW

HMIS H-2 F-1 R-0 PPE* * Sec.8

POTENTIAL HEALTH EFFECTS

Primary Entry Routes: Inhalation and absorption.

Target Organs: Mucous membranes, skin

Acute Effects

Inhalation: Irritating to mucous membranes and respiratory tract.

Eye: Irritating to eyes

Skin: Irritating to skin. May cause sensitization by skin contact

Ingestion: Not expected to be harmful under normal conditions of use.

Carcinogenicity: Quartz is classified as a carcinogen when in respirable dust form.

Medical Conditions Aggravated by Long-Term Exposure: Dermatitis.

Chronic Effects: Prolonged and repeated skin contact may cause dermatitis, photosensitization, and melanosis. Adverse symptoms from prolonged exposure may include respiratory tract irritation and coughing. Eyes may become painful and red after prolonged exposure.

Section 4 – First Aid Measures

Inhalation: Move exposed person to fresh air. If not breathing, provide artificial respiration by trained personnel. Get medical attention if adverse health effects persist or are severe.

Eye Contact: Flush thoroughly with water for at least 15 minutes. Get medical attention.

Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly before removing. Continue to rinse for at least 10 minutes. Get medical attention if irritation worsens. Wash clothing before reuse. Clean shoes thorough before reuse.

Ingestion: Wash out mouth with water. Do not induce vomiting. Seek medical attention.

After first aid, get appropriate in-plant paramedic or community medical support.

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Special Precautions/Procedures: It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation because of irritation hazard. Contact local poison treatment specialist if large amounts have been ingested.

Provide adequate ventilation to keep vapors/dusts below allowable exposure levels. Use PPE appropriate for the task.

Section 5 – Fire Fighting Measures

Flash Point: > 200°F

Flash Point Method: NA

Auto Ignition Temperature: Not Determined

LEL: NA

UEL: NA

Flammability Classification: Class IIIB

Extinguishing Media: Dry chemical, foam and carbon dioxide. Do **NOT** use water jet.

Unusual Fire or Explosion Hazards: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous Combustion Products: Oxides of carbon

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways. Use a water supply to cool fire-exposed containers.

Fire-Fighting Equipment: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



Section 6 – Accidental Release Matters

Spill/Leak Procedures: Stop spill at source. Confine spill by diking or impoundment. Remove sources of heat or ignition. Clean-up spill but do not flush to sewer or surface water. Ventilate area and avoid breathing vapors or mists.

Small Spills: Stop spill at source if possible. Isolate and confine by diking, or similar method. Remove discharged material.

Large Spills:

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Mix with inert absorbent material such as soil, sand, or oil dry, to stabilize.

Regulatory Requirements: Notify local health and pollution control agencies as appropriate. Follow applicable OSHA regulations (29 CFR 1900.120). This material is not a hazardous waste as defined in RCRA. For disposal follow all federal, state, and local regulations regarding solid waste.

Section 7 – Handling and Storage

Handling Precautions: Use appropriate PPE (see section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Empty containers retain residue. Do not reuse containers. Do not sand final product once hardened: contains quartz.

Storage Requirements: Store in original container protected from direct sunlight in a dry, cool, well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep containers tightly closed and sealed. Do not store in unlabeled containers.

Regulatory Requirements: None known.

Section 8 – Exposure Controls / Personal Protection

Engineering Controls: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs if established (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH -approved respirator. Select

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respirator based on its suitability. to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. **Use self-contained, positive-pressure, breathing apparatus (SCBA) when this product is used in a confined or enclosed space and exposure limits are exceeded or hydrogen sulfide concentration is unknown or exceeds 20 ppm. Organic vapor respirators may be used with good ventilation when organic vapors are less than 1000 ppm or ten times permissible exposure limit, whichever is less. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA until it is determined that a hazardous atmosphere and/or oxygen deficient atmosphere is NOT PRESENT. *Warning! air-purifying respirators do not protect workers in oxygen-deficient atmospheres.*** If respirators are used, OSHA requires a written respiratory protection program that includes: procedures for selecting respirators; medical evaluation; fit testing; use in routine and emergency situations; cleaning, disinfecting, storing, inspecting, repairing, discarding and maintaining respirators; adequate air quality, quantity and flow; training in respiratory hazards; training in use of respirators; and an evaluation of the effectiveness of the respiratory program.

Protective Clothing/Equipment: Wear protective gloves, boots, aprons, and gauntlets as need to prevent skin contact. Goggles and face shields should be used in areas where splashing may occur. Wear protective eyeglasses or safety goggles per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, or smoking.

Section 9 – Physical and Chemical Properties

Physical State: Heavy Liquid

Appearance and Odor: Light grey color with slight odor

Odor Threshold: No data

Vapor Pressure: Not Determined

Vapor Density (Air = 1): NA

Formula Weight: Varies

Density: 15.02 lb/gal

Specific Gravity (H₂O = 1, at 4°C): 1.8

pH: NA

Water Solubility: Insoluble

Other Solubilities: Ketones, Ethers

Boiling Point: >212°F

Freezing/Melting Point: No data.

Viscosity: 1.2 million cps

Refractive Index: Not Determined

Surface Tension: Not Determined

% Volatile: Nil

Evaporation Rate: Not Determined

Section 10 – Stability and Reactivity

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Strong oxidizing agents, acids, bases, amines

Conditions to Avoid: Do not store near open flame. Do not freeze.

Hazardous Decomposition Products: Primary decomposition products are carbon monoxide and carbon dioxide.

Section 11 – Toxicological Information

Eye Effects: Vapors may cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.

Acute Inhalation Effects: Human, inhalation, TC_{LO}: No data.

Carcinogenicity: Quartz is classified as a carcinogen when in respirable form.

Teratogenicity: No data.

Chronic Effects: Prolonged and repeated skin contact may cause dermatitis, photosensitization, and melanosis.

Skin Effects: Causes smarting of the skin and first-degree burns on short exposure; may cause secondary burns on long exposure.

Acute Oral Effects: Rat, oral, LD₅₀: 30,000 mg/kg

Mutagenicity: No data.

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Section 12 – Ecological Information

Ecotoxicity: Toxic to aquatic organisms: LC50 between 1 and 10 mg/L (Epichlorohydrin)

Environmental Fate:

- Environmental Transport:** No data.
- Environmental Degradation:** No data.
- Soil Absorption/Mobility:** No data.

Section 13 – Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements: Solidified waste material should not be a hazardous waste under RCRA guidelines. Follow Federal, state, and local regulations for disposal of solid waste.

Container Cleaning and Disposal: Recommend using a non-hazardous solvent to remove the product. Follow Federal, state, and local regulations for disposal of the waste material, regardless of its waste classification.

Section 14 – Transport Information

Shipments by rail, air, or highway below the RQ, not subject to HMR.

Shipments by rail, air, or highway above the RQ, use the following shipping information:

Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Epichlorohydrin)

Packaging Authorizations:

- a) Exceptions:** 173.155
- b) Non-bulk Packaging:** 173.203
- c) Bulk Packaging:** 173.241

Quantity Limitations:

- a) Passenger, Aircraft, or Railcar:** No limit
- b) Cargo Aircraft Only:** No limit

Hazard Class: 9

ID No.: UN3082

Packing Group: III

Label: 9

RQ: 100 lbs (500 lbs total of product)

Special Provisions (172.102): 8, 146, IB3, T4, TP1, TP29

Above RQ Shipping Description:

"RQ, UN3082, Environmentally hazardous substance, liquid, n.o.s. (Epichlorohydrin), 9, III"

Vessel Stowage Requirements:

- a) Vessel Stowage:** A
- b) Other: Marking:** Marine Pollutant

Shipments by vessel below RQ: "UN3082, Environmentally hazardous substance, liquid, n.o.s. (Epichlorohydrin), 9, III, Marine Pollutant"

Shipments by vessel above RQ: "RQ, UN3082, Environmentally hazardous substance, liquid, n.o.s. (Epichlorohydrin), 9, III, Marine Pollutant"

Section 15 – Regulatory Information

EPA Regulations:

RCRA

RCRA Hazardous Waste Number: Not listed.

RCRA Hazardous Waste Classification (40 CFR 261): This material should not be hazardous due to characteristics.

CERCLA

CERCLA: Not listed.

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CERCLA Reportable Quantity (RQ): Epichlorohydrin: 100 lbs

SARA

SARA 311/312 Codes: Fire–No, Pressure–No, Reactivity–No, Immediate (acute)–Yes, Delayed (chronic)–Yes.

SARA Toxic Chemical: Not listed.

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed.

OSHA Regulations

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): See Table in Section 2.

OSHA Specifically Regulated Substance: No

State Regulations: California Prop 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (Epichlorohydrin and Quartz)

Section 16 – Other Information

Revision Notes:

Additional Hazard Rating Systems: WHMIS: Class D-2B: Material causing other toxic effects.

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