

**1. Identification****Product identifier** **NOVOCOAT<sup>TM</sup> EP4900 CERAMIC CARBIDE PART A****Other means of identification** None.**Recommended use** Not available.**Recommended restrictions** None known.**Manufacturer/Importer/Supplier/Distributor information****Company Name** Armor Limited, Inc.  
**Address** 2410 US-15 South, Sumter, SC 29150**After hours telephone number** 1-877-982-7667**Normal work hours telephone number** 1-877-982-7667**Website** [www.armor-inc.com](http://www.armor-inc.com)**E-mail** [customerservice@armor-inc.com](mailto:customerservice@armor-inc.com)**Emergency 24-hour telephone number** CHEMTREC North America: +1-800-424-9300, International: +1-703-527-3887**Information on operation hours** 8:00 a.m. to 5:00 p.m.**2. Hazard(s) identification****Physical hazards** Not classified.**Health hazards** Skin corrosion/irritation Category 2  
Sensitization, skin Category 1**Environmental hazards** Not classified.**OSHA defined hazards** Not classified.**Label elements****Signal word** Warning**Hazard statement** Causes skin irritation. May cause an allergic skin reaction.**Precautionary statement****Prevention** Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.**Response** If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Specific treatment see Section 4 of this SDS. IF ON SKIN: Wash with plenty of soap and water.**Storage** Store in accordance with local/regional/national regulations.**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.**Hazard(s) not otherwise classified (HNOC)** None known.**Supplemental information** Not applicable.**3. Composition/information on ingredients****Mixtures**

Chemical name	Common name and synonyms	CAS number	%
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER		28064-14-4	10 - 20
QUARTZ		14808-60-7	10 - 20
BISPHENOL A-(EPICHLOROHYDRIN) EPOXY RESIN		25068-38-6	1 - 10
Other components below reportable levels			67.124

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Rinse with water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Observe good industrial hygiene practices.
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**Conditions for safe storage, including any incompatibilities** Store in original tightly closed container.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>	Respirable dust.

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible).

#### Skin protection

##### Hand protection

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

##### Other

Wear suitable protective clothing.

#### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Liquid.

#### Form

Paste.

#### Color

Colorless.

#### Odor

Slight Odor

#### Odor threshold

Not available.

#### pH

Not available.

#### Melting point/freezing point

Not available.

#### Initial boiling point and boiling range

> 392 °F (> 200 °C) estimated

#### Flash point

> 392.0 °F (> 200.0 °C) Pinsky-Martens Closed Cup estimated

#### Evaporation rate

Not available.

#### Flammability (solid, gas)

Not available.

#### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	20 g/l
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	19.36 lb/gal estimated
<b>Specific gravity</b>	2.32 estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause sensitization by inhalation.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes eye irritation.
<b>Ingestion</b>	May cause discomfort if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	Irritating to skin.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. This product contains crystalline silica. Silica is a known carcinogen; however in this encapsulated form the normal routes of exposure are unavailable.

### IARC Monographs. Overall Evaluation of Carcinogenicity

QUARTZ (CAS 14808-60-7)

1 Carcinogenic to humans.

## OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

QUARTZ (CAS 14808-60-7)

Cancer

## US. National Toxicology Program (NTP) Report on Carcinogens

QUARTZ (CAS 14808-60-7)

Known To Be Human Carcinogen.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product contains a substance which is toxic to aquatic organisms.

Product	Species	Test Results	
NOVOCOAT™ EP4900 CERAMIC CARBIDE PART A			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	41.2844 mg/l, 48 hours estimated
Fish	LC50	Fish	22.9358 mg/l, 96 hours estimated
Components	Species	Test Results	
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER (CAS 28064-14-4)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Fish	1 - 10 mg/l

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

## 15. Regulatory information

**US federal regulations** All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

QUARTZ (CAS 14808-60-7)

Cancer  
lung effects  
immune system effects  
kidney effects

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312** Yes

**Hazardous chemical**

**Classified hazard categories** Skin corrosion or irritation  
Respiratory or skin sensitization

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**California Proposition 65**



**WARNING:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

QUARTZ (CAS 14808-60-7)

Listed: October 1, 1988

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

QUARTZ (CAS 14808-60-7)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	06-12-2020
<b>Revision date</b>	10-22-2021
<b>Version #</b>	02
<b>NFPA ratings</b>	Health: 2 Flammability: 1 Instability: 0
<b>Disclaimer</b>	The information provided in this Safety Data Sheet is correct to the best of our knowledge information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
<b>Revision information</b>	Composition / Information on Ingredients: Ingredients Composition/information on ingredients: Component information Physical & Chemical Properties: Multiple Properties Transport Information: Proper Shipping Name/Packing Group Transport information: General information GHS: Classification