SAFETY DATA SHEET

1. Identification

Product identifier	**NOVOCOAT™ EP3800 CERAMIC CARBIDE FC PART B**
Other means of identification	None.
Recommended use	Highly abrasive service
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name	ErgonArmor, a division of Ergon Asphalt & Emulsions, Inc.
Address	2829 Lakeland Drive Jackson, MS 39232 USA
After hours telephone number	1-800-222-7122
Normal work hours telephone number	1-877-982-7667
Website	www.ergonarmor.com
E-mail	sds@ergon.com
Emergency 24-hour telephone number	CHEMTREC: North America 1-800-424-9300 International 1-800-527-3887
Information on operation hours	8:00 a.m. to 5:00 p.m.

2. Hazard(s) identification

Hazards for the product as sold

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Germ cell mutagenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Warning
Hazard statement	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. 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. Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash before reuse. Specific treatment see Section 4 of this SDS. IF exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS No./Unique ID	%
2,4,6-Tris(dimethylaminomethyl)phenol		90-72-2	1 - 20
POLYMERCAPTAN RESIN		Trade Secret	1 - 20
BISPHENOL A-(EPICHLOROHYDRIN) EPOXY RESIN		25068-38-6	1 - 10
PHENOL		108-95-2	1 - 10
Triethylene Tetramine		112-24-3	1 - 10
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.		68609-97-2	< 1
Other components below reportable levels			70 - < 80

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.
Skin contact	Wash off with soap and plenty of water. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Wash clothing separately before reuse. Call a physician or poison control center immediately.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not use mouth-to-mouth method if victim ingested the substance. Call a physician or poison control center immediately.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Rash. Skin irritation. Irritation of eyes. May cause an allergic skin reaction. May cause redness and pain. Dermatitis.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Keep victim warm. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Ensure adequate ventilation. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Keep upwind. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. 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. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep or scoop up and remove. 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. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not get in eyes, on skin, or on clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use personal protective equipment as required. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value
PHENOL (CAS 108-95-2)	PEL	19 mg/m3 5 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
PHENOL (CAS 108-95-2)	TWA	5 ppm

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
PHENOL (CAS 108-95-2)	IDLH	1.8 % 250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
PHENOL (CAS 108-95-2)	Ceiling	60 mg/m3
		15.6 ppm
	TWA	19 mg/m3
		5 ppm

US. OARS. Workplace Environmental Exposure Level (WEEL) Guide

Components	Type	Value
Triethylene Tetramine (CAS 112-24-3)	TWA	6 mg/m3
		1 ppm

Biological limit values

ACGIH Biological Exposure Indices (BEI)

Components	Value	Determinant	Specimen	Sampling Time
PHENOL (CAS 108-95-2)	250 mg/g	Phenol with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines Occupational Exposure Limits are not relevant to the current physical form of the product.

US - California OELs: Skin designation

PHENOL (CAS 108-95-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

PHENOL (CAS 108-95-2) Skin designation applies.

US - Tennessee OELs: Skin designation

PHENOL (CAS 108-95-2) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

PHENOL (CAS 108-95-2) Danger of cutaneous absorption

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

PHENOL (CAS 108-95-2) Can be absorbed through the skin.

US WEEL Guides: Skin designation

Triethylene Tetramine (CAS 112-24-3) Can be absorbed through the skin.

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

PHENOL (CAS 108-95-2) Can be absorbed through the skin.

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 with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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. Do not get in eyes, on skin, on clothing. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Physical state Paste.

Form Liquid. Paste.

Color Not available.

Odor	Amine.
Melting point/freezing point	Not available.
Boiling point or initial boiling point and boiling range	Not available.
Flammability	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Flash point	≥200.0 °F (≥93.3 °C)
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH	Not available.
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Vapor pressure	Not available.
Density and/or relative density	
Density	2.26 g/l @25°C
Vapor density	Not available.
Particle characteristics	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases. Chlorine. N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents Organic acids (i.e. acetic acid, citric acid etc.). Sodium hypochlorite. Substances/products that react with isocyanates. Strong mineral acids. Vinyl acetates. Ethylene Oxide. Nitrates and halogen oxides.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Causes serious eye irritation. Skin irritation. Dermatitis. May cause an allergic skin reaction. Exposure may cause temporary irritation, redness, or discomfort. Rash.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
NOVOCOAT™ EP3800 CERAMIC CARBIDE FC PART B		
Acute		
Dermal		
LD50	Rabbit	32950 mg/kg
Inhalation		
LC50	Rat	26525 mg/l, 8 Hours
Oral		
LD50	Rat	17170 mg/kg

Components	Species	Test Results
2,4,6-Tris(dimethylaminomethyl)phenol (CAS 90-72-2)		
Acute		
Oral		
LD50	Rat	1653 mg/kg
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (CAS 68609-97-2)		
Acute		
Dermal		
	Rabbit	> 4000 mg/kg
Inhalation		
Vapor		
LC50	Rat	> 0.15 mg/l, 7 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Triethylene Tetramine (CAS 112-24-3)		
Acute		
Dermal		
Point estimate*		300 mg/kg bw
Oral		
LD50	Rat	1716 mg/kg

* Point estimate = Converted acute toxicity point estimate

Skin corrosion/irritation Causes skin irritation.

Corrosivity

2,4,6-Tris(dimethylaminomethyl)phenol	OECD Test Guideline 404 Result: Corrosive after 1 to 4 hours of exposure Species: Rabbit
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Result: Skin irritation

Serious eye damage/eye irritation Causes serious eye irritation.

Eye

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	OECD Test Guideline 405 Result: No eye irritation Species: Rabbit
2,4,6-Tris(dimethylaminomethyl)phenol	Result: Irreversible effects on the eye Species: Rabbit

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization May cause an allergic skin reaction.

Skin sensitization

2,4,6-Tris(dimethylaminomethyl)phenol	Buehler Test Result: Negative Species: Guinea pig

Skin sensitization

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Maximization test Result: Positive Species: Guinea pig

Germ cell mutagenicity Suspected of causing genetic defects.

Germ cell mutagenicity: Ames test

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	In vitro Result: Negative
2,4,6-Tris(dimethylaminomethyl)phenol	OECD Test Guideline 471 Result: Negative

Mutagenicity

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	In vitro mammalian cell gene mutation test Result: Negative Transgenic rodent somatic cell gene mutation assay Result: Negative Species: Rat

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

PHENOL (CAS 108-95-2)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Reproductivity

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Embryo-foetal development (Ingestion) Result: Negative Species: Rat
2,4,6-Tris(dimethylaminomethyl)phenol	OECD Test Guideline 422 Result: Negative Species: Rat
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	One-generation reproduction toxicity study Result: Positive Species: Rat

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	> 100 mg/kg NOAEL (Ingestion) Species: Rat Test Duration: 90 days
2,4,6-Tris(dimethylaminomethyl)phenol	15 mg/kg NOAEL (Ingestion) Species: Rat Test Duration: 43 days

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
NOVOCOAT™ EP3800 CERAMIC CARBIDE FC PART B			
Aquatic			
Crustacea	EC50	Daphnia	1.5947 mg/l, 48 hours
Fish	LC50	Fish	5.0337 mg/l, 96 hours

Components		Species	Test Results
2,4,6-Tris(dimethylaminomethyl)phenol (CAS 90-72-2)			
Aquatic			
Algae	EC50	Algae	84 mg/l, 72 Hours
	NOEC	Algae	6.25 mg/l, 72 Hours
Fish	LC50	Oncorhynchus mykiss	180 mg/l, 96 Hours
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs. (CAS 68609-97-2)			
Aquatic			
Acute			
Algae	EC50	Freshwater algae	843 mg/l, 72 Hours
	NOEC	Freshwater algae	500 mg/l, 72 Hours
Chronic			
Crustacea	EC10	Daphnia magna	> 1 mg/l, 21 days

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

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2,4,6-Tris(dimethylaminomethyl)phenol	0.219
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.77
PHENOL	1.46
Triethylene Tetramine	-2.65

Mobility in soil No data available.

Other adverse effects 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

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products 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).

Contaminated packaging 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

UN number UN2735

UN proper shipping name Amines, liquid, corrosive, n.o.s. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL)

Transport hazard class(es)

Class 8

Subsidiary hazard -

Packing group II

Environmental hazards YES

ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

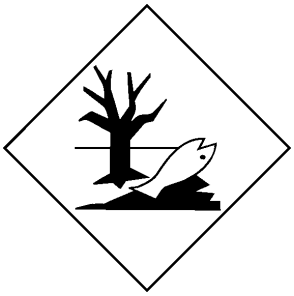
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL), MARINE POLLUTANT
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Packing group	II
Environmental hazards	
Marine pollutant	YES
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to IMO instruments	Not applicable. Not established.

IATA; IMDG

Marine pollutant



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) One or more components of the mixture are not on the TSCA 8(b) inventory or are designated “inactive”.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

PHENOL (CAS 108-95-2)

SARA 304 Emergency release notification

PHENOL (CAS 108-95-2)	1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
PHENOL	108-95-2	1000		500	10000

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Germ cell mutagenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
PHENOL	108-95-2	1 - 10

Other federal regulations

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

PHENOL (CAS 108-95-2)

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

PHENOL (CAS 108-95-2) Low priority

US state regulations

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

PHENOL (CAS 108-95-2)

California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	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
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

Issue date 06-04-2025

Revision date	10-03-2025
Version #	03
NFPA ratings	Health: 2 Flammability: 1 Instability: 0
Disclaimer	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.