SAFETY DATA SHEET

1. Identification

Product identifier **EP39XX Series Part B Coating and Lining (All Colors)**

Other means of identification Not available.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name Ergon Armor

Address 1655 Harbor Avenue
Memphis, TN 38113
USA

Telephone 1-800-222-7122

Website www.ergonarmor.com

E-mail sds@ergon.com

Emergency 24-hour phone 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

Physical hazards Not classified.

Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Sensitization, respiratory	Category 1
Sensitization, skin	Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes eye irritation. Causes skin irritation. May cause an allergic skin reaction.

Prevention Wear protective gloves. Wear eye/face protection. Wash thoroughly after handling.

Response Specific treatment see Section 4 of this SDS. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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	%
QUARTZ		14808-60-7	15 - 25
FORMALDEHYDE, POLYMER WITH N1,N2-BIS(2-AMINOETHYL)-1,2-ET HANEDIAMINE AND PHENOL		32610-77-8	5 - 20
MIXED CYCLOAPLIPHATIC AMINES		Mixture	5 - 20

Chemical name	Common name and synonyms	CAS number	%
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)		1761-71-3	1 - 10
TRIENTINE		112-24-3	1 -10
BENZYL ALCOHOL		100-51-6	0 -10
PHENOL		108-95-2	1 - 5
Other components below reportable levels			29.75

Composition comments The full text for all R-phrases is displayed in Section 16 of the SDS.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

Eye contact Rinse with water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Ingestion 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.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This material is classified as a water pollutant under the Clean Water Act and should be preventec 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. 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 Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

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

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

Components	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.3 mg/m3 0.1 mg/m3 2.4 mppcf	Total dust. Respirable. Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
PHENOL (CAS 108-95-2)	TWA	5 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
PHENOL (CAS 108-95-2)	Ceiling	60 mg/m3 15.6 ppm	
	TWA	19 mg/m3 5 ppm	
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
BENZYL ALCOHOL (CAS 100-51-6)	TWA	44.2 mg/m3 10 ppm
TRIENTINE (CAS 112-24-3)	TWA	6 mg/m3 1 ppm

Biological limit values

ACGIH Biological Exposure Indices

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

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 - Tennesse 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) Can be absorbed through the skin.

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

TRIENTINE (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; chemical goggles (if splashing is possible).

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	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Golden to Light Amber
Odor	Ammoniacal. Amine-like.
Odor threshold	Not available.
pH	Alkaline
Melting point/freezing point	4.64 °F (-15.2 °C) estimated
Initial boiling point and boiling range	359.15 °F (181.75 °C) estimated
Flash point	174.2 °F (79.0 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	3 % estimated
Flammability limit - upper (%)	10 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Partial
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	640 °F (337.78 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Specific gravity	0.95

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	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.

Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
EP39XX Series Part B Coating and Lining (All Colors) (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	12111.6436 mg/kg estimated
	Rat	16625.248 mg/kg estimated
Inhalation		
LC50	Rat	14194.8672 mg/l, 8 Hours estimated
Oral		
LD50	Cat	2.4851 g/kg estimated
	Dog	12.4254 g/kg estimated
	Mouse	5164.6387 mg/kg estimated
	Rabbit	27538.043 mg/kg estimated
	Rat	2977.0847 mg/kg estimated
Other		
LD50	Mouse	2307.1165 mg/kg estimated
	Rat	3206.8247 mg/kg estimated

Components	Species	Test Results
4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) (CAS 1761-71-3)		
Acute		
Oral		
LD50	Rat	380 mg/kg
BENZYL ALCOHOL (CAS 100-51-6)		
Acute		
Dermal		
LD50	Rabbit	2000 mg/kg
Inhalation		
LC50	Rat	1000 mg/l, 8 Hours
Oral		
LD50	Mouse	1580 mg/kg
	Rabbit	1940 mg/kg
	Rat	1230 - 3100 mg/kg
Other		
LD50	Mouse	950 mg/kg
	Rat	314 mg/kg
PHENOL (CAS 108-95-2)		
Acute		
Dermal		
LD50	Rabbit	850 mg/kg
	Rat	669 mg/kg
Oral		
LD50	Cat	0.1 g/kg
	Dog	0.5 g/kg
	Mouse	270 mg/kg

Components	Species	Test Results
	Rat	317 mg/kg
Other		
LD50	Mouse	112 mg/kg
	Rat	460 mg/kg

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

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization May cause sensitization by skin contact.

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

PHENOL (CAS 108-95-2)	3 Not classifiable as to carcinogenicity to humans.
QUARTZ (CAS 14808-60-7)	1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

QUARTZ (CAS 14808-60-7)	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

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

Product		Species	Test Results
EP39XX Series Part B Coating and Lining (All Colors) (CAS Mixture)			
Crustacea	EC50	Daphnia	1025.7384 mg/l, 48 hours estimated
Fish	LC50	Fish	557.4909 mg/l, 96 hours estimated
Components		**Species**	**Test Results**
BENZYL ALCOHOL (CAS 100-51-6)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	10 mg/l, 96 hours
PHENOL (CAS 108-95-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia obtusa)	4.7 - 6.4 mg/l, 48 hours
Fish	LC50	Asiatic knifefish (Notopterus notopterus)	8 - 8.25 mg/l, 96 hours

* 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)

BENZYL ALCOHOL	1.1
PHENOL	1.46

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 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.

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.

US RCRA Hazardous Waste U List: Reference

PHENOL (CAS 108-95-2)	U188

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

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)

PHENOL (CAS 108-95-2)	Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

PHENOL (CAS 108-95-2)	1000 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

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

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
PHENOL	108-95-2	1 - 5

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.

US state regulations

US. Massachusetts RTK - Substance List

BENZYL ALCOHOL (CAS 100-51-6)
PHENOL (CAS 108-95-2)
QUARTZ (CAS 14808-60-7)
TRIENTINE (CAS 112-24-3)

US. New Jersey Worker and Community Right-to-Know Act

PHENOL (CAS 108-95-2) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

BENZYL ALCOHOL (CAS 100-51-6)
PHENOL (CAS 108-95-2)
QUARTZ (CAS 14808-60-7)
TRIENTINE (CAS 112-24-3)

US. Rhode Island RTK

PHENOL (CAS 108-95-2)

US. California Proposition 65

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.

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

QUARTZ (CAS 14808-60-7) Listed: October 1, 1988

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)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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 02-26-2015

Version # 01

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.

Revision Information Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: United States