



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SC5400 Series Part A
Version # 02
Revision date 01-20-2011
CAS # Mixture
Manufacturer Ergon Armor
Division Memphis
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Jackson, MS 39215-1639
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CHEMTREC North America 1 (800) 424 9300 International 1 (703) 527 3887

2. Hazards Identification

Emergency overview Health injuries are not known or expected under normal use.
OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects
Eyes Health injuries are not known or expected under normal use.
Skin Health injuries are not known or expected under normal use.
Inhalation Health injuries are not known or expected under normal use.
Ingestion Health injuries are not known or expected under normal use.
Potential environmental effects Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
CARBON BLACK	1333-86-4	< 1
SILICON DIOXIDE (AMORPHOUS)	7631-86-9	1 - 5
ALUMINIUM OXIDE	1344-28-1	10 - 20
1,3-DIGLYCIDYLOXYBENZENE	101-90-6	10 - 20
Non-hazardous components	CAS #	Percent
PHENOL-FORMALDEHYDE POLYMER GLYCIDYL ETHER	28064-14-4	30 - 50
SILICATE MINERALS	Mixture	30 - 50

4. First Aid Measures

First aid procedures
Eye contact Rinse with water. Get medical attention if irritation develops and persists.
Skin contact Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	The product is not flammable. No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	Water. Water fog. Dry chemical powder. Carbon dioxide (CO2). Alcohol foam.
Specific methods	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Clean surface thoroughly to remove residual contamination. Soak up with inert absorbent material. Following product recovery, flush area with water. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Handle and open container with care.
Storage	Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
ALUMINIUM OXIDE (1344-28-1)	TWA	1.0000 mg/m3	Respirable fraction.
CARBON BLACK (1333-86-4)	TWA	3.5000 mg/m3	

U.S. - OSHA

Components	Type	Value	Form
ALUMINIUM OXIDE (1344-28-1)	PEL	5.0000 mg/m3 15.0000 mg/m3	Respirable fraction. Total dust.
CARBON BLACK (1333-86-4)	PEL	3.5000 mg/m3	
SILICON DIOXIDE (AMORPHOUS) (7631-86-9)	TWA	20.0000 mppcf 0.8000 mg/m3	

Personal protective equipment

Eye / face protection	Not normally needed.
Skin protection	No special protective equipment required.
Respiratory protection	No personal respiratory protective equipment normally required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Paste.
Color	Not available.
Odor	Slight.
Odor threshold	N/A
Physical state	Liquid.
Form	Not available.
pH	N/A

Melting point	N/A
Freezing point	N/A
Boiling point	> 392 °F (> 200 °C)
Flash point	> 392 °F (> 200 °C)
Evaporation rate	N/A
Flammability (Train fire)	N/A
Flammability limits in air, upper, % by volume	N/A
Flammability limits in air, lower, % by volume	N/A
Vapor pressure	< 1 mm Hg @ 20°C
Vapor density	> 1
Specific gravity	1.3 typical
Relative density	N/A
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
VOC	Negligible
Viscosity	N/A

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, sparks, flames. Contact with incompatible materials.
Incompatible materials	Peroxides. Strong acids, alkalis and oxidizing agents. Fluorine. Chlorine.
Hazardous decomposition products	If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced.

11. Toxicological Information

Toxicological data

Product	Test Results
SC5400 Series Part A (Mixture)	Acute Oral LD50 Mouse: 7352 mg/kg estimated Acute Oral LD50 Rabbit: 9424 mg/kg estimated Acute Oral LD50 Rat: 19.53 g/kg estimated Acute Other LD50 Mouse: 1.8468 g/kg estimated Acute Other LD50 Rabbit: 9.424 g/kg estimated
Components	Test Results
1,3-DIGLYCIDYLOXYBENZENE (101-90-6)	Acute Oral LD50 Mouse: 980 mg/kg Acute Oral LD50 Rabbit: 1240 mg/kg Acute Oral LD50 Rat: 2.57 g/kg Acute Other LD50 Mouse: 0.243 g/kg Acute Other LD50 Rabbit: 1.24 g/kg Acute Other LD50 Rat: 0.178 g/kg
CARBON BLACK (1333-86-4)	Acute Oral LD50 Rat: > 8000 mg/kg
SILICON DIOXIDE (AMORPHOUS) (7631-86-9)	Acute Oral LD50 Mouse: > 15000 mg/kg Acute Oral LD50 Rat: > 22500 mg/kg

12. Ecological Information

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not applicable.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)	0.1 %
ALUMINIUM OXIDE (CAS 1344-28-1)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)	Listed.
ALUMINIUM OXIDE (CAS 1344-28-1)	Listed.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
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)	No
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	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)	Listed.
CARBON BLACK (CAS 1333-86-4)	Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

1,3-DIGLYCIDYLOXYBENZENE (CAS 101-90-6)	500 LBS
ALUMINIUM OXIDE (CAS 1344-28-1)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

ALUMINIUM OXIDE (CAS 1344-28-1)	Listed.
CARBON BLACK (CAS 1333-86-4)	Listed.
SILICON DIOXIDE (AMORPHOUS) (CAS 7631-86-9)	Listed.

16. Other Information

HMIS® ratings	Health: 1* Flammability: 1 Physical hazard: 2
NFPA ratings	Health: 1 Flammability: 1 Instability: 0 Special hazards: W
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