

1. Identification
Product identifier ERTECH 2036

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 mary.snow@ergon.com
Contact Person Mary Ellen Snow
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 Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.
Signal word None.
Hazard statement The mixture does not meet the criteria for classification.
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.

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 | % |
|--|--------------------------|------------|-----------|
| ASPHALT | | 8052-42-4 | 40 - < 50 |
| WATER | | 7732-18-5 | 30 - < 40 |
| KAOLIN | | 1332-58-7 | 10 - 15 |
| QUARTZ | | 14808-60-7 | < 3 |
| 2-BUTOXYETHANOL | | 111-76-2 | 1 - < 3 |
| CARBON BLACK | | 1333-86-4 | < 1 |
| Other components below reportable levels | | | 1 - < 3 |

4. First-aid measures
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.

| | |
|---|---|
| Skin contact | If clothing sticks to the skin, do not remove. Lotion or hand cream may aid in the removal of asphalt. Wash contact areas with soap and water. If needed, seek medical attention. |
| 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 if irritation develops and persists. |
| Ingestion | Rinse mouth. DO NOT induce vomiting. Get medical attention immediately. If ingestion of a large amount does occur, call a poison control center immediately. |
| 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

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| Suitable extinguishing media | Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Water. 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 | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. |
| Fire-fighting equipment/instructions | ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. |
| Specific methods | In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

| | |
|--|---|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. 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. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | <p>This product is miscible in water.</p> <p>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. Prevent entry into waterways, sewer, basements or confined areas.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Ventilate area and avoid breathing vapors or mist. For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.</p> |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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|---|---|
| Precautions for safe handling | Avoid prolonged exposure. Use only in well-ventilated areas. Trace amounts of hydrogen sulfide, a very highly toxic gas, may be present with this material. Keep face clear of tank and/or tank car openings. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. |
| Conditions for safe storage, including any incompatibilities | Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Do not allow material to freeze. |

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 |
|--------------------------------|------|---|-------------------------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | PEL | 240 mg/m ³ | |
| CARBON BLACK (CAS 1333-86-4) | PEL | 50 ppm 3.5 mg/m ³ | |
| KAOLIN (CAS 1332-58-7) | PEL | 5 mg/m ³ 15 mg/m ³ | Respirable fraction. Total dust. |

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

| Components | Type | Value | Form |
|-------------------------|------|--|---|
| QUARTZ (CAS 14808-60-7) | TWA | 0.3 mg/m ³ 0.1 mg/m ³ 2.4 millions of particle | Total dust. Respirable. Respirable. |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|--------------------------------|------|-------------------------|----------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | TWA | 20 ppm | |
| ASPHALT (CAS 8052-42-4) | TWA | 0.5 mg/m ³ | Inhalable fraction. |
| CARBON BLACK (CAS 1333-86-4) | TWA | 3 mg/m ³ | Inhalable fraction. |
| KAOLIN (CAS 1332-58-7) | TWA | 2 mg/m ³ | Respirable fraction. |
| QUARTZ (CAS 14808-60-7) | TWA | 0.025 mg/m ³ | Respirable fraction. |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|--------------------------------|---------|---|----------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | TWA | 24 mg/m ³ 5 ppm | |
| ASPHALT (CAS 8052-42-4) | Ceiling | 5 mg/m ³ | Fume. |
| CARBON BLACK (CAS 1333-86-4) | TWA | 0.1 mg/m ³ | |
| KAOLIN (CAS 1332-58-7) | TWA | 5 mg/m ³ 10 mg/m ³ | Respirable. Total |
| QUARTZ (CAS 14808-60-7) | TWA | 0.05 mg/m ³ | Respirable dust. |

Biological limit values

ACGIH Biological Exposure Indices

| Components | Value | Determinant | Specimen | Sampling Time |
|--------------------------------|----------|--|---------------------|---------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | 200 mg/g | Butoxyacetic acid (BAA), with hydrolysis | Creatinine in urine | * |

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

Exposure guidelines

US - California OELs: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-BUTOXYETHANOL (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

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

2-BUTOXYETHANOL (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|---|
| Eye/face protection | Chemical goggles and face shield are recommended. Wear safety glasses with side shields (or goggles). |
| Hand protection | Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves. |
| Other | Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact. Plastic or rubber gloves, apron and boots. |
| 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. |

9. Physical and chemical properties

| | |
|---|------------------------------|
| Appearance | Heavy-consistency emulsion. |
| Physical state | Liquid. |
| Form | Liquid. Viscous |
| Color | Black |
| Odor | Mild Petroleum Odor |
| Odor threshold | Not available. |
| pH | 5 - 7 |
| Melting point/freezing point | 32 °F (0 °C) |
| Initial boiling point and boiling range | 212 °F (100 °C) |
| Flash point | > 212.0 °F (> 100.0 °C) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | 60 mm Hg at 100°F |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Slightly |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | 400 °F (204.44 °C) estimated |
| Decomposition temperature | Not available. |
| Viscosity | < 20000 cP (77 °F (25 °C)) |
| Other information | |
| Density | 8.50 - 10.50 lb/gal |
| Flammability class | Combustible IIIB estimated |
| Specific gravity | 1.02 - 1.26 |
| VOC (Weight %) | 0.3 lb/gal maximum estimated |

10. Stability and reactivity

| | |
|---------------------------|---|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Stable under normal temperature conditions. |

| | |
|---|--|
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid temperatures exceeding the flash point. Contact with incompatible materials. Do not overheat product. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | Upon decomposition, this product may yield sulfur dioxide, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Hydrogen sulfide. |

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 | No adverse effects due to skin contact are expected. |
| Eye contact | Harmful in contact with eyes. |

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 |
|---------------------------|------------|------------------------------------|
| ERTECH 2036 (CAS Mixture) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 13384.1934 mg/kg estimated |
| | Rat | 44026.4883 mg/kg estimated |
| <i>Inhalation</i> | | |
| LC50 | Mouse | 23422.3379 mg/l, 7 Hours estimated |
| | Rat | 3124.5146 mg/l, 4 Hours estimated |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 40.1526 g/kg estimated |
| | Mouse | 40.1526 g/kg estimated |
| | Rabbit | 10.7074 g/kg estimated |
| | Rat | 10701.7578 mg/kg estimated |
| <i>Other</i> | | |
| LD50 | Mouse | 28347.1602 mg/kg estimated |
| | Rabbit | 9368.9355 mg/kg estimated |
| | Rat | 9143.9824 mg/kg estimated |

| Components | Species | Test Results |
|--------------------------------|------------|-------------------|
| 2-BUTOXYETHANOL (CAS 111-76-2) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 400 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Mouse | 700 mg/l, 7 Hours |
| | Rat | 450 mg/l, 4 Hours |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 1.2 g/kg |
| | Mouse | 1.2 g/kg |
| | Rabbit | 0.32 g/kg |
| | Rat | 560 mg/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 1130 mg/kg |

| Components | Species | Test Results |
|------------------------------|---------|--------------|
| | Rabbit | 280 mg/kg |
| | Rat | 340 mg/kg |
| CARBON BLACK (CAS 1333-86-4) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | Rat | > 8000 mg/kg |
| KAOLIN (CAS 1332-58-7) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rat | > 5000 mg/kg |
| <i>Oral</i> | | |
| LD50 | Rat | > 5000 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 Harmful in contact with eyes. None known.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization May cause skin disorders if contact is repeated or prolonged.

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

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

| | |
|--------------------------------|---|
| 2-BUTOXYETHANOL (CAS 111-76-2) | 3 Not classifiable as to carcinogenicity to humans. |
| ASPHALT (CAS 8052-42-4) | 2B Possibly carcinogenic to humans. |
| CARBON BLACK (CAS 1333-86-4) | 3 Not classifiable as to carcinogenicity to humans. |
| QUARTZ (CAS 14808-60-7) | 2B Possibly carcinogenic to humans. |
| | 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 Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Hazardous by OSHA criteria. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Not expected to be hazardous by WHMIS criteria.

Further information This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

| Product | Species | Test Results |
|--------------------------------|---------|---------------------------------------|
| ERTECH 2036 (CAS Mixture) | | |
| Crustacea | EC50 | Daphnia |
| Fish | LC50 | Fish |
| | | 45214.5156 mg/l, 48 hours estimated |
| | | 13458.8945 mg/l, 96 hours estimated |
| Components | Species | Test Results |
| 2-BUTOXYETHANOL (CAS 111-76-2) | | |
| Aquatic | | |
| Fish | LC50 | Inland silverside (Menidia beryllina) |
| | | 1250 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)

2-BUTOXYETHANOL 0.83

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 in accordance with all applicable regulations. No components are identified as hazardous wastes. Disposal recommendations are based on uncontaminated material.

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. Not applicable.

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). Avoid discharge into water courses or onto the ground.

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)

2-BUTOXYETHANOL (CAS 111-76-2) Listed.

ASPHALT (CAS 8052-42-4) Listed.

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

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 No

Hazardous chemical

SARA 313 (TRI reporting)

| Chemical name | CAS number | % by wt. |
|-----------------|------------|----------|
| 2-BUTOXYETHANOL | 111-76-2 | 1 - < 3 |

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 WARNING: This product contains a chemical known to the State of California to cause cancer.

US. Massachusetts RTK - Substance List

2-BUTOXYETHANOL (CAS 111-76-2)
ASPHALT (CAS 8052-42-4)
CARBON BLACK (CAS 1333-86-4)
KAOLIN (CAS 1332-58-7)
QUARTZ (CAS 14808-60-7)

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

2-BUTOXYETHANOL (CAS 111-76-2) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

2-BUTOXYETHANOL (CAS 111-76-2)
ASPHALT (CAS 8052-42-4)
CARBON BLACK (CAS 1333-86-4)
KAOLIN (CAS 1332-58-7)
QUARTZ (CAS 14808-60-7)

US. Rhode Island RTK

2-BUTOXYETHANOL (CAS 111-76-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

ASPHALT (CAS 8052-42-4) Listed: January 1, 1990
CARBON BLACK (CAS 1333-86-4) Listed: February 21, 2003
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) | 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) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | 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 04-09-2014

Revision date 04-15-2014

Version # 02

Further information HMIS® is a registered trade and service mark of the NPCA.

References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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. The information in the sheet was written based on the best knowledge and experience currently available.

Revision Information

Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties
GHS: Classification