# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **K-14 Mortar Powder**

**Other means of identification** Not available.

**Recommended use** Not available.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**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

**Physical hazards** Not classified.

**Health hazards** Carcinogenicity Category 1A

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

No hazards resulting from the material as supplied.

**Label elements**

**Signal word** Danger

**Hazard statement** May cause cancer.

**Prevention** Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

**Response** IF exposed or concerned: Get medical advice/attention.

**Storage** Store in accordance with local/regional/national/international regulation. 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 number | % |
|---|---|---|---|
| Alumina Silicate | | 1302-93-8 | 50 - 70 |
| QUARTZ | | 14808-60-7 | 20 - < 30 |
| CRISTOBALITE | | 14464-46-1 | 15.655105973 |
| Clay (hydrous alumina silicate) | | 1302-87-0 | 8.4778420038 |

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE | | 16871-90-2 | 1 - < 3 |

## 4. First-aid measures

**Inhalation** Move to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. If breathing is difficult, give oxygen. Get medical attention.

**Skin contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye contact** In case of contact, immediately flush eyes with large amounts of water, continuing to flush for 15 minutes. Get medical attention.

**Ingestion** Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention.

**Most important symptoms/effects, acute and delayed** Not available.

**Indication of immediate medical attention and special treatment needed** In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** IF exposed or concerned: Get medical advice/attention. Keep victim warm. Keep victim under observation. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

**Suitable extinguishing media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** Not available.

**Specific hazards arising from the chemical** Not applicable.

**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.

**Fire-fighting equipment/instructions** In the event of fire, cool tanks with water spray.

**Specific methods** Cool containers exposed to flames with water until well after the fire is out.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear appropriate protective equipment and clothing during clean-up.

**Methods and materials for containment and cleaning up** Not available.

## 7. Handling and storage

**Precautions for safe handling** Do not breathe dust. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.

**Conditions for safe storage, including any incompatibilities** Keep container tightly closed. Keep out of reach of children. Store in a cool, dry place. Use care in handling/storage.

## 8. Exposure controls/personal protection

**Occupational exposure limits**

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

| Components | Type | Value |
|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | PEL | 2.5 mg/m3 |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Components | Type | Value | Form |
|---|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | TWA | 2.5 mg/m3 | Dust. |

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

| Components | Type | Value | Form |
|---|---|---|---|
| CRISTOBALITE (CAS 14464-46-1) | TWA | 0.15 mg/m3 | Total dust. |
| | | 0.05 mg/m3 | Respirable. |
| | | 1.2 mppcf | Respirable. |
| QUARTZ (CAS 14808-60-7) | TWA | 0.3 mg/m3 | Total dust. |
| | | 0.1 mg/m3 | Respirable. |
| | | 2.4 mppcf | Respirable. |

**US. ACGIH Threshold Limit Values**

| Components | Type | Value | Form |
|---|---|---|---|
| Alumina Silicate (CAS 1302-93-8) | TWA | 1 mg/m3 | Respirable fraction. |
| CRISTOBALITE (CAS 14464-46-1) | TWA | 0.025 mg/m3 | Respirable fraction. |
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | TWA | 2.5 mg/m3 | |
| QUARTZ (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |

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

| Components | Type | Value | Form |
|---|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | TWA | 2.5 mg/m3 | |
| QUARTZ (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | 3 mg/l | Fluoride | Urine | * |
| | 2 mg/l | Fluoride | Urine | * |

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

**Exposure guidelines** Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

**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. Ensure adequate ventilation, especially in confined areas.

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

**Eye/face protection** Goggles/face shield are recommended.

**Hand protection** Wear protective gloves.

**Skin protection**

**Other** Wear appropriate clothing to prevent any possibility of skin contact with solutions containing 10% or more of this chemical.

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

**Thermal hazards** Not available.

**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** Powder.

**Physical state** Solid.

**Form** Powder

| | |
|---|---|
| **Color** | Light tan to grey |
| **Odor** | Not available. |
| **Odor threshold** | Not available. |
| **pH** | Not available. |
| **Melting point/freezing point** | Not available. |
| **Initial boiling point and boiling range** | Not available. |
| **Flash point** | Not available. |
| **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** | Not available. |
| **Vapor density** | Not available. |
| **Relative density** | Not available. |
| **Solubility(ies)** | |
| **Solubility (water)** | Insoluble |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | Not available. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | Not available. |
| **Conditions to avoid** | None under normal conditions. |
| **Incompatible materials** | Strong oxidizing agents. Hydrogen fluoride. |
| **Hazardous decomposition products** | Oxides of silicon. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Ingestion** | Not available. |
| **Inhalation** | Not available. |
| **Skin contact** | Not available. |
| **Eye contact** | Harmful in contact with eyes. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Not available. |

**Information on toxicological effects**

**Acute toxicity**

| Product | Species | Test Results |
|---|---|---|
| K-14 Mortar Powder (CAS Mixture) | | |
| **Acute** | | |
| *Oral* | | |
| LC50 | Rat | 6477.0605 mg/kg estimated |

| Components | Species | Test Results |
|---|---|---|
| DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2) | | |
| **Acute** | | |
| *Oral* | | |
| LC50 | Rat | 156 mg/kg |

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

**Skin corrosion/irritation** Not available.

**Serious eye damage/eye irritation** Harmful in contact with eyes. None known.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**Skin sensitization** This material contains a component that is capable of being absorbed through intact skin and that has been shown to cause reproductive and developmental effects in laboratory animals.

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

**Carcinogenicity** Hazardous by OSHA criteria. Hazardous by WHMIS criteria. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Cancer Hazard. In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Risk of cancer cannot be excluded with prolonged exposure.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

| | |
|---|---|
| CRISTOBALITE (CAS 14464-46-1) | 1 Carcinogenic to humans. |
| QUARTZ (CAS 14808-60-7) | 1 Carcinogenic to humans. |

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

| | |
|---|---|
| CRISTOBALITE (CAS 14464-46-1) | Known To Be Human Carcinogen. |
| 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 available.

**Specific target organ toxicity - repeated exposure** Not available.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

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

## 12. Ecological information

**Ecotoxicity** Not expected to be harmful to aquatic organisms.

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Dispose in accordance with all applicable regulations.

**Hazardous waste code** Not regulated.

**Waste from residues / unused products** Not available.

**Contaminated packaging** Not available.

## 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** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

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

Not regulated.

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

Not 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 - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

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

**US. Massachusetts RTK - Substance List**

CRISTOBALITE (CAS 14464-46-1)
QUARTZ (CAS 14808-60-7)

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

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

CRISTOBALITE (CAS 14464-46-1)
DIPOTASSIUM HEXAFLUOROSILICATE (CAS 16871-90-2)
QUARTZ (CAS 14808-60-7)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

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

| | |
|---|---|
| CRISTOBALITE (CAS 14464-46-1) | Listed: October 1, 1988 |
| 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) | No |
| 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) | 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 | Yes |
| 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)
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** | 04-10-2015 |
| **Revision date** | 01-12-2016 |
| **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
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
Korea. Prohibited Chemical Substances (TCCL Article 11)
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
Korea. Restricted Chemical Substances (TCCL Article 11)
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
Korea. Toxic Chemicals (TCCL Article 10)
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
HSDB® - Hazardous Substances Data Bank
JIS Z 7250: 2005 Safety data sheet for chemical products-Part 1:Content and order of sections
JCIA GHS Guideline, October 2008
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits

**Disclaimer**

Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the mandatory requirements of OSHA.

**Revision Information**

Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Disclosure Overrides
GHS: Classification