

1. Identification

Product identifier ZIRMUL

Other means of identification
Brand Code 8542

Recommended use For Industrial Use Only

Recommended restrictions Avoid dry cutting, blasting, or dust generation.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name HarbisonWalker International

Address 1305 Cherrington Parkway, Suite 100
 Moon Township, Pennsylvania 15108 US

Telephone General Phone: 412-375-6600

Website www.thinkHWI.com

Emergency phone number Not available.

2. Hazard(s) identification

Classified hazards

This item is defined as an article per OSHA, REACH, and WHMIS and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Wear protective gloves/protective clothing/eye protection.

Label elements

This item is defined as an article per OSHA, REACH, and WHMIS and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Wear protective gloves/protective clothing/eye protection.

Hazard(s) not otherwise classified (HNOC)

This item is defined as an article per OSHA, REACH, and WHMIS and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not Classified as hazardous. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. Wear protective gloves/protective clothing/eye protection.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------------|--|------------|----------|
| Aluminium Oxide (Non-Fibrous) | | 1344-28-1 | 30 - 50 |
| Mullite | | 1302-93-8 | 20 - 40 |
| ZIRCONIUM SILICATE (Zircon) | | 14940-68-2 | 20 - 40 |
| Zirconium Dioxide | | 1314-23-4 | 10 - 25 |
| Amorphous Silica | Fumed Silica Silica, crystalline free | 7631-86-9 | 2.5 - 10 |

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.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

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.

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Not available.

Specific hazards arising from the chemical

Not applicable.

Special protective equipment and precautions for firefighters

Not available.

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

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. 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 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 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|---|------|----------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | PEL | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| Zirconium Dioxide (CAS 1314-23-4) | PEL | 5 mg/m3 | |
| ZIRCONIUM SILICATE (Zircon) (CAS 14940-68-2) | PEL | 5 mg/m3 | |

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

| Components | Type | Value | Form |
|---|------|-----------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 5 mg/m3 | Respirable fraction. |
| | | 15 mg/m3 | Total dust. |
| | | 50 mppcf | Total dust. |
| | | 15 mppcf | Respirable fraction. |
| Amorphous Silica (CAS 7631-86-9) | TWA | 0.8 mg/m3 | |
| | | 20 mppcf | |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|---|------|----------------------|----------------------|
| Aluminium Oxide (Non-Fibrous) (CAS 1344-28-1) | TWA | 1 mg/m ³ | Respirable fraction. |
| Mullite (CAS 1302-93-8) | TWA | 1 mg/m ³ | Respirable fraction. |
| Zirconium Dioxide (CAS 1314-23-4) | STEL | 10 mg/m ³ | |
| | TWA | 5 mg/m ³ | |
| ZIRCONIUM SILICATE (Zircon) (CAS 14940-68-2) | STEL | 10 mg/m ³ | |
| | TWA | 5 mg/m ³ | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|--|------|----------------------|
| Amorphous Silica (CAS 7631-86-9) | TWA | 6 mg/m ³ |
| Zirconium Dioxide (CAS 1314-23-4) | STEL | 10 mg/m ³ |
| | TWA | 5 mg/m ³ |
| ZIRCONIUM SILICATE (Zircon) (CAS 14940-68-2) | STEL | 10 mg/m ³ |
| | TWA | 5 mg/m ³ |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eye contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m³ OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

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**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

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****Physical state**

Solid.

Form

Brick or Cast Shape

Color

Not available.

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) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

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 | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure. |
| 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 | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

| | |
|----------------------------------|--|
| Acute toxicity | Not known. |
| 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 a respiratory sensitizer. |
| Skin sensitization | This product is not expected to cause skin sensitization. |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity | Not classifiable as to carcinogenicity to humans. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| Amorphous Silica (CAS 7631-86-9) | 3 Not classifiable as to carcinogenicity to humans. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052) | |
| Not regulated. | |
| US. National Toxicology Program (NTP) Report on Carcinogens | |
| 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 an aspiration hazard. |
| Chronic effects | Prolonged inhalation may be harmful. |

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. |
| Persistence and degradability | No data is available on the degradability of any ingredients in the mixture. |
| Bioaccumulative potential | No data available. |
| 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 | 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. |
| Hazardous waste code | Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority. |
| 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 applicable. |

15. Regulatory information

| | |
|-------------------------------|--|
| US federal regulations | This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All chemical substances in this product are listed on the TSCA chemical substance inventory where required. |
|-------------------------------|--|

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical No (Exempt)**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|-------------------------------|------------|----------|
| Aluminium Oxide (Non-Fibrous) | 1344-28-1 | 30 - 50 |

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****California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. 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 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) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| 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** 05-09-2015**Revision date** 10-07-2020**Version #** 02

Disclaimer This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.