

Material Safety data sheet

SECTION 1: Identification of the substance/mixture of the company/undertaking

1.1 Product identifier

Product name: Zircon Sand

CAS number: 14940-68-2

EC Number: 239-019-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Refractory and Foundry material

1.3 Details of the supplier of the safety data sheet

HENAN SICHENG ABRASIVES TECH CO.,LTD

ROOM 1903,YAXING TIMES PLAZA,ERQI DISTRICT,ZHENGZHOU CITY,HENAN PROVINCE,CHINA

SALES@ZZHAIXU.CN

1.4 Emergency telephone number of supplier

TEL: +8637160305639

FAX: +8637160305637

MP: +8615838373120

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008): Physical and chemical hazards: not classified

Human health: not classified

Environment: not classified

Classification (67/548/EEC): Not classified

The full text for all R-phrases and hazard statements are displayed in section 16.

2.2 Label elements

Label in accordance with (EC) No. 1272/2008: no pictogram required

2.3 Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.1 Substances

Product / ingredient name	%	CAS No	EC No	Classification
Zircon	~99	14940-68-2	239-019-6	Not classified
Quartz	<1	14808-60-7	238-878-4	Not classified
Uranium	<1	7440-61-1	231-170-6	T+;R26-28 R33 R53

The full text for all R phrases and hazard statements are displayed in section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No specific symptoms noted.
Ingestion: No specific symptoms noted.
Skin contact: No specific symptoms noted.
Eye contact: No specific symptoms noted.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Fire fighting measures

5.1 Extinguishing media

This product is not flammable. Use fire extinguishing media appropriate for surrounding materials.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: None under normal conditions

5.3 Advice for firefighters

Special fire fighting procedures: No specific fire fighting procedures given

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Follow precautions for safe handling described in this safety data sheet

6.2 Environmental precautions The product should not be dumped in nature but collected and delivered

according to agreement with the local authorities.

6.3 Methods and material for containment and cleaning up

Avoid dust formation. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Transfer to a container for disposal.

6.4 Reference to other sections For personal protection see section 8. For waste disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid handling which leads to dust formation. Avoid inhalation of high concentrations of dust. Observe occupational exposure limits and minimise the risk of inhalation of dust.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

7.3 Specific end use(s)

The identified uses for this product are detailed in section 1.2

8. Exposure controls/personal protection

Occupational exposure limits

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

Material	Type	Value
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ZIRCONIUM SILICATE;
(ZIRCONIUM SILICON

OXIDE; ZIRCON)	PEL	5 mg/m3	
Components Type	TYPE	Value	

ZIRCONIUM SILICATE (CAS 14940-68-2)	PEL	5 mg/m3	
Impurities	Type	Value	

URANIUM (NATURAL) (CAS 7440-61-1)	PEL	0.25mg/m3	
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US. OSHA Table Z-3 (29 CFR 1910.1000)			
Impurities	Type	Value	Form
Crystalline Silica (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			
Material	Type	Value	

ZIRCONIUM SILICATE; (ZIRCONIUM SILICON OXIDE; ZIRCON)	STEL TWA	10 mg/m3 5 mg/m3	
Components	Type	Value	

ZIRCONIUM SILICATE (CAS 14940-68-2)	STEL TWA	10 mg/m3 5 mg/m3	
Impurities	Type	Value	Form

URANIUM (NATURAL) (CAS 7440-61-1)	STEL TWA	0.6 mg/m3 0.2 mg/m3	
Crystalline Silica (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards			
Material	Type	Value	

ZIRCONIUM SILICATE; (ZIRCONIUM SILICON OXIDE; ZIRCON)	STEL TWA	10 mg/m3 5mg/m3	
Components	Type	Value	

ZIRCONIUM SILICATE			
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(CAS 14940-68-2)	STEL	10 mg/m3	
	TWA	5mg/m3	
Impurities	TYPE	VALUE	FORM
URANIUM (NATURAL)			
(CAS 7440-61-1)	STEL	0.6 mg/m3	
	TWA	0.2 mg/m3	
Crystalline Silica	TWA	0.05 mg/m3	Respirable dust.
(CAS 14808-60-7)			

Biological limit values

ACGIH Biological Exposure Indices

Impurities	Value	Determinant	Specimen	Sampling Time
URANIUM (NATURAL)	200 µg/l	Uranium Urine	URINE	
(CAS 7440-61-1)				

- For sampling details, please see the source document.

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. Suitable gloves can be recommended by the glove supplier.

Other Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic and physical and chemical properties

Appearance:	Granular powder, dust
Colour:	Brown
Odour:	Odourless
Solubility:	Insoluble in water
Melting point (°C):	2200
Relative density:	4.6

9.2 Other information Not relevant

SECTION 10: Stability and reactivity

10.1 Reactivity No specific reactivity hazards associated with this product.

- 10.2 Chemical stability** Stable under normal temperature conditions.
- 10.3 Possibility of hazardous reactions** Not relevant
- 10.4 Conditions to avoid** No specific conditions are likely to result in a hazardous situation
- 10.5 Incompatible materials** Materials to avoid: No specific groups of materials are likely to react to produce a hazardous situation.
- 10.6 Hazardous decomposition products** None under normal circumstances

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Other health effects: This substance has no evidence of carcinogenic properties.
- Acute toxicity
- Acute toxicity (Oral LD50): Not relevant
- Acute toxicity (Dermal LD50): Not relevant
- Acute toxicity (Inhalation LC50): Not relevant
- Inhalation: Dust in high concentrations may irritate the respiratory system.
- Ingestion: May cause discomfort if swallowed.
- Skin contact: Powder may irritate skin.
- Eye contact: Particles in the eyes may cause irritation and smarting.

SECTION 12: Ecological information

- Ecotoxicity:** Not regarded as dangerous for the environment.
- 12.1 Acute fish toxicity:** Not considered toxic to fish.
- 12.2 Persistence and degradability**
- Degradability: The product is not readily biodegradable.
- 12.3 Bioaccumulative potential:** The product is not bioaccumulating.
- 12.4 Mobility in soil:** Not relevant, due to the form of the product.
- 12.5 Results of PBT and vPvB assessment:** This product does not contain any PBT or vPvB substances.
- 12.6 Other adverse effects:** None known

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods:** Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: Transport considerations

- Road transport notes: Not classified
- Rail transport notes: Not classified
- Sea transport notes: Not classified
- Air transport notes: Not classified
- 14.1 UN Number:** The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).
- 14.2 UN proper shipping name:** Not classified for transportation.
- 14.3 Transport and hazard class(es):** Not classified for transportation.
- 14.4 Packing group:** Not classified for transportation.
- 14.5 Environmental hazards**
- Environmentally hazardous substances / marine pollutant: no
- 14.6 Special precautions for user:** Not classified for transportation.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

Approved code of practice: Classification and labelling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.

Guidance notes: Workplace Exposure Limits EH40.

EU Legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2 Chemical Safety Assessment: Not applicable. No chemical safety assessment has been carried out.

SECTION 16: Other information

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However no warranty guarantee or representation is made to its accuracy, reliability of completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.