

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

1.1 Product identifiers

1.1.1 Product name

Baddeleyite powder

1.1.2 REACH No

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

1.2.1 Identified uses

Designed for the production of resistant refractory products, abrasives, ceramics, heat-resistant coatings, products for radio electronics, enamels and others on the territory of Russia and for export.

2.2 Details of the supplier of the safety data sheet

Company: Joint Stock Company «Kovdorsky Integrated Mining and Processing Facility»

Address: 184141, Murmansk region, Kovdor district, Kovdor, Sukhachev St., 5

Phone: +7 (815-35) 76001

Fax: +7 (815-35) 72763

Email: Fax_kdr@eurochem.ru

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Sensitisation, Skin

Specific target organ toxicity – repeated, category 2.

2.2 Label elements

Signal word: Warning

Pictograms:



Hazard Statement Code(s):

H317: May cause an allergic skin reaction;

H373: May cause damage to organs through prolonged or repeated exposure.

2.3 Other hazards

Not

SECTION 3: Composition / information on ingredients

3.1 Substances

CAS No	EC No	Mass fraction	Chemical name of substance
-	-		Amount of:
1314-23-4	215-227-2	98,695	Zirconium dioxide
12055-23-1	235-013-2		Hafnium dioxide
7631-86-9	231-545-4	0,303	Silicon dioxide
1309-37-1	215-168-2	0,09	Diiron trioxide
1305-78-8	215-138-9	0,393	Calcium oxide
13463-67-7	236-675-5	0,101	Titanium dioxide
1314-56-3	215-236-1	0,182	Diphosphorus pentaoxide

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled

If inhaled, remove to fresh air. When breathing is stopped, apply artificial ventilation. Get medical advice.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Rinse mouth with water. Take activated charcoal and salt laxative. Do NOT induce vomiting

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Non-combustible substance. Select by main source of ignition

5.2 Special hazards arising from the substance or mixture

Not

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Not

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing aerosols. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Spillage of baddeleyite powder or dry industrial products and wastes should be removed by a hydrospray. In some cases, it is allowed to collect the powder in a scoop (shovel) in the receiver and send it for processing with observance of anti-dust measures. Do not touch spilled substance. Wipe spillage with earthen shaft, fill with inert

material, collect in a container. Do not let the substance enter water bodies, cellars, sewers. Avoid contact with oxidants

6.3 Methods and materials for containment and cleaning up

Protect the spill, and then collect and place in a container for disposal in accordance with local regulations (see Section 13). Store in suitable closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of mist. No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Must be stored in a packaged form in the covered dry ventilated warehouse of the supplier (consumer). Shelf life - without restriction. Incompatible substances: alkali, fire and explosive substances, hydrofluoric acid and concentrated sulfuric acid.

7.3 Specific and use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Control of the MAC of the working area – 6 mg / m³

8.2 Exposure controls

Appropriate engineering controls

Do not eat, drink or smoke in the work area. After work, wash your hands thoroughly.

8.2.1 Individual protection means

Eye/face protection

Protective glasses

Skin protection

Special clothes, special shoes

Respiratory protection

Respirators

8.3 Control of environmental exposure

No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic: physical and chemical properties

- a) **Appearance: Powder**
- b) **Odor: odorless**
- c) **Humidity: 0.5**
- d) **Specific activity: 30; 70 kBq / kg**
- e) **Effective specific activity: 10 kBq / kg**

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reduce, reacts with metal oxides of groups I, II and III

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Avoid contact with incompatible substances

10.5 Incompatible materials

Hydrofluoric and concentrated sulfuric acids, organic substances, strong oxidants, acids, fire and explosive substances

10.6 Hazardous decomposition products

Not

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Zirconium dioxide:

DL50 > 4000 mg / kg, oral, rat, mouse

Hafnium dioxide:

DL50 => 5000 mg / kg, oral, rat

CL50 => 4300 mg / m3, rat, 4 h.

Skin corrosion/irritation

Does not irritate

Serious eye damage/eye irritation

Does not irritate

Respiratory or skin sensitization

Skin sensitization is established

Germ cell mutagenicity

Not installed

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Has not toxicity for reproduction

Specific target organ toxicity - single exposure

Not installed

Specific target organ toxicity - repeated exposure

Specific target organ toxicity (repeated exposure) is established

Aspiration hazard

Not installed

Additional Information

no data available

SECTION 12: Ecological information

12.1 Toxicity

Zirconium dioxide:

CL50 > 100 mg / l, fish, 96 h.

EC50 > 100 mg / l, Daphna magna, 48 h.

Hafnium dioxide:

NOEC > 100 mg / l, fish, 96 h.

EC50 > 100 mg / l, Daphna magna, 48 h.

EC50 > 100 mg / l, seaweed, 72 h.

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer an excess product and one that is not recyclable, a waste disposal company with a good reputation.

Contaminated packaging

To be sent for recycling (processing into secondary raw materials) to specialized enterprises.

SECTION 14: Transport information

14.1 UN number: Not dangerous goods

14.2 UN proper shipping name: Not dangerous goods

14.3 Transport hazard class(es): Not dangerous goods

14.4 Packaging group: Not dangerous goods

14.5 Special precautions for user: Special precautions are not required

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Not