

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

Date Issued: 6/11/2019

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY / UNDERTAKING

| | |
|----------------------------|---|
| Product name | Zirconium(IV)oxide |
| Product code | NO-0059 |
| CAS | 1314-23-4 |
| 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. |
| Identified uses | Laboratory chemicals, Manufacture of substances |
| Supplier | IoLiTec Ionic Liquids Technologies GmbH Salzstrasse 184 D – 74076 Heilbronn Germany |
| Telephone | +49 (0)7131-89839-0 |
| Fax | +49 (0)7131-89839-109 |
| Emergency telephone | +49 (0)176-84850874 |
| Email | msds@iolitec.de |

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion/irritation, Category 2, H315

Serious eye damage/Eye irritation, Category 2, H319

Specific Target Organ Toxicity - Single exposure: Respiratory tract irritation, Category 3, H335

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016


Date Issued: 6/11/2019

Classification (67/548/EEC or 1999/45/EC)

Irritating to eyes, respiratory system and skin.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008, GHS)

| | |
|--|--|
| Pictogram |  |
| Signal word | Warning |
| Hazard statement(s) | |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| Precautionary statement(s) | |
| P261 | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray . |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Caution - substance not yet tested completely. | |
| Supplemental Hazard Statements | none |

Labelling (67/548/EEC or 1999/45/EC)

Hazard symbol(s)



R-phrase(s)

R36/37/38

Irritating to eyes, respiratory system and skin.

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

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S-phrase(s)

S22 Do not breathe dust.
S24 Avoid contact with skin.
S25 Avoid contact with eyes.
Caution - substance not yet tested completely.

3 COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient name | Contents | Health(Class) | Risk(R/No.) |
|--------------------|----------|---------------|---------------------------------|
| Zirconium(IV)oxide | 99.9% | | Substance not yet fully tested! |

| Formula | Molecular Weight |
|------------------|------------------|
| ZrO ₂ | 123.22 g/mol |

4 FIRST AID MEASURES

General Contaminated clothing should be removed and washed before being reused.

Inhalation Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/ oxygen.

Ingestion Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.

Skin Wash the skin immediately with soap and water.

Eyes Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

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5 FIRE FIGHTING MEASURES

| | |
|---|---|
| Extinguishing media | Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions. |
| Special fire fighting procedures | No special procedures required. |
| Unusual fire & explosion hazards | Emission of toxic fumes, capability of creating a dust explosion |
| Protective measures in fire | Wear self-contained breathing apparatus as combustion may produce hazardous fumes. |

6 ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| Personal precautions during spill | Wear protective clothing and avoid inhalation of powder, fume and vapor as well as skin or eye contact. |
| Precautions to protect environment | Avoid washing into water courses. Avoid contaminating public drains or water supply. |
| Spill cleanup methods | Avoid contact with skin or inhalation of spillage, dust or vapor, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. |

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

Date Issued: 6/11/2019

7 HANDLING AND STORAGE

Handling precautions

Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage precautions

Keep closed.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

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9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------|-------------------------|
| Appearance | Solid |
| Odor/taste | No characteristic odor. |
| Boiling Point | 4,300 °C |
| Melting Point | 2,600 °C |
| SG/Density | 5.9 g/cm ³ |
| Solubility in water | insoluble |

10 STABILITY AND REACTIVITY

| | |
|--------------------------------|--|
| Stability | No particular stability concerns. |
| Conditions to avoid | Strong acids and oxidizing agents. |
| Hazardous Decomposition | |
| Products | Consistency of decomposition products unknown. |

11 TOXICOLOGICAL INFORMATION

| | |
|--|-------------------|
| Acute toxicity | no data available |
| Skin corrosion/irritation | no data available |
| Serious eye damage/eye irritation | no data available |
| Respiratory or skin sensitization | no data available |
| Germ cell mutagenicity | no data available |
| Carcinogenicity | no data available |

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

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Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Ingestion

May be harmful if swallowed.

Inhalation

May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Skin

May cause irritation.

Eyes

May cause irritation.

Additional Information

RTECS: Not available

Full Data on the toxicity of this product are not available. Hazardous properties cannot be excluded.

12 ECOLOGICAL INFORMATION

Do not allow material to be released to the environment without proper governmental permits.

Safety Data Sheet

Zirconium Oxide powder

Revision Date: 5/13/2016

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13 DISPOSAL CONSIDERATIONS

Disposal method Contact specialist disposal companies. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

| | |
|-----------------------------|---|
| General | Not classified as dangerous for transport purposes. |
| Road transport notes | Not classified as dangerous for road transport. |
| Rail transport notes | Not classified as dangerous for rail transport. |
| Sea transport notes | Not classified as dangerous for sea transport. |
| Air transport notes | Not classified as dangerous for air transport. |

15 REGULATORY INFORMATION

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

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

no data available

Chemical Safety Assessment

no data available

Safety Data Sheet

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Country specific information:

Germany

Classification according to German Regulation VwVwS

Reg.no. 2894 (annex 3):

German Regulation WGK 1 (Water hazard class 1): Low hazard to water.

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|-----------------------------|
| 16 OTHER INFORMATION |
|-----------------------------|

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