| | |
|---|---|
| **Product** | Glass filler |
| **Revision date** | 14 November 2017 |
| **Revision** | 1 |

# Safety Data Sheet (SDS)

## Section 1: Identification of the substance/preparation and of the company/undertaking

### 1.1 Product identifier

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|---|---|
| **Product name** | **Glass filler** |
| **Synonyms, Trade names** | No information available. |

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

| | |
|---|---|
| **Identified uses** | Reinforcement of plastics. |
| **Uses advised against** | Any other purpose. |

### 1.3 Details of the supplier of the safety data sheet

| | |
|---|---|
| **Supplier** | Renishaw plc<br>Brooms Road<br>Stone Business Park<br>Stone, Staffordshire<br>ST15 0SH<br>United Kingdom<br>+44 (0) 1785 285000 (during UK office hours 09:00 to 17:00 UTC). |
| **Contact person** | msds@renishaw.com |

### 1.4 Emergency telephone number

| | |
|---|---|
| **Emergency telephone** | 999 / 911 or local emergency number |

## 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 |

### 2.2 Label elements

| | |
|---|---|
| **Contains** | Not applicable |
| **Label in accordance with (EC) no. 1272/2008** | No pictogram required |
| **Signal word** | No Signal Word |
| **Hazard statements** | No hazard statements required |
| **Precautionary statements** | No precautionary statements required |

### 2.3 Other hazards

This product is not classified as hazardous. The information in this datasheet is given for guidance only.

## Section 3: Composition/identification of ingredients

### 3.1 Substance

Not applicable.

### 3.2 Mixtures

| Name | Product identifier | Reg. EU 1272/2008 | % |
|---|---|---|---|
| glass, oxide, chemicals | CAS-No.: 65997-17-3<br>EC No.: 266-046-0 | | 60-100% |

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

**Composition comments** This product is non hazardous, the information is given for guidance only. The data shown are in accordance with the latest EC Directives.

## Section 4: First aid measures

### 4.1 Description of first aid measures

**General information** Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

**Inhalation** Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

**Ingestion** If this product is ingested, remove victim immediately from source of exposure. Rinse mouth thoroughly. Do not induce vomiting. Provide fresh air, warmth and rest. Get medical attention. Never give anything by mouth to an unconscious person.

**Skin contact** Remove victim immediately from source of exposure. Remove contaminated clothing. Wash the skin immediately with water. Get medical attention if symptoms persist.

**Eye contact** Do not rub eye. If dust from use of this product contacts the eyes, gently flush eyes with water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if present and easy to do so. Avoid contaminating unaffected eye. Seek medical attention.

### 4.2 Most important symptoms and effects, both acute and delayed

**General information** The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation** High dust levels may irritate the respiratory system.

**Ingestion** Ingestion may cause nausea and irritation to the mouth, throat and digestive system.

**Skin contact** May cause mechanical irritation or abrasion. May cause temporary irritation in sensitive individuals.

**Eye contact** Dust may cause mechanical irritation.

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to the physician** Treat symptomatically.

## Section 5: Fire-fighting measures

### 5.1 Extinguishing media

**Extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** None noted.

### 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products** During fire, toxic gases (CO, CO2) are formed.

**Unusual fire & explosion hazards** No unusual fire or explosion hazards noted.

**Specific hazards** Fire creates: Carbon monoxide (CO). Carbon dioxide (CO2).

### 5.3 Advice for firefighters

**Special fire fighting procedures** If possible, fight fire from protected position. Avoid breathing fire vapours. Ventilate closed spaces before entering them. Containers close to fire should be removed immediately or cooled with water if safe to do so.

**Protective equipment for firefighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard

EN 469 will provide a basic level of protection for chemical incidents.

## Section 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Eliminate all sources of ignition. Avoid inhalation of dust or vapours and contact with skin and eyes. In case of inadequate ventilation, use respiratory protection.

**For emergency responders** Follow safe handling advice and personal protective equipment recommendations for normal use of product.

### 6.2 Environmental precautions

**Environmental precautions** Do not allow ANY environmental contamination.

### 6.3 Methods and material for containment and cleaning up

**Spill clean up methods** Take up mechanically. Remove waste promptly to a safe area. Avoid generation and spreading of dust.

### 6.4 Reference to other sections

**Reference to other sections** See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

**Handling** Use proper personal protection when handling (refer to Section 8). Do not use contact lenses.
Use local exhaust and general room ventilation, in addition to good hygiene standards, to prevent accumulation of any dust or fibres in the work area.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep the product in its original container. Store in dry, cool, well-ventilated area.

**Storage class** Unspecified storage.

### 7.3 Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

**Usage description** Use only according to directions.

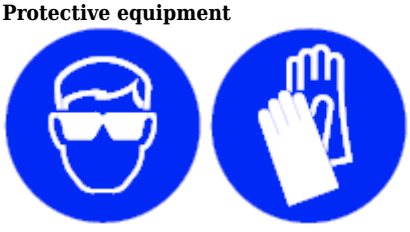
## Section 8: Exposure controls/Personal protection

### 8.1 Control parameters

**Ingredient comments** No exposure limits noted for ingredient(s).
Workplace Exposure Limits Guidance Note EH40/2005.
The National Institute for Occupational Safety and Health (NIOSH).

### 8.2 Exposure Controls

**Protective equipment**



**Engineering measures** Personal, workplace atmosphere or biological monitoring may be required to determine the

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| | effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.<br>European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required. |
| **Respiratory equipment** | Use respirators and components tested and approved under appropriate government standards such as CEN (EU). If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/145/143/149.<br>Suggested PPE: Half facepiece or full facepiece air-purifying respirator suitable for particulates. (EN149). Particle filter class P1 (EN143). Consult manufacturer for specific advice. |
| **Hand protection** | Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. Gloves must be inspected prior to use. Suggested material: Butyl-rubber. Consult manufacturer for specific advice on material. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with dust residues. |
| **Eye protection** | Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU). Suggested PPE: Protective goggles with side shield or tightly fitting protective goggles. |
| **Other protection** | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handing this product. Protective clothing should conform to EN 13982 for dusts. |
| **Hygiene measures** | Observe normal hygiene standards. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke. |
| **Process conditions** | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Ensure that eye flushing systems are located close by in the work place. |

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

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|---|---|
| **Appearance** | Solid. |
| **Colour** | Colourless. |
| **Odour** | Odourless. |
| **Odour threshold - lower** | No information available. |
| **Odour threshold - upper** | No information available. |
| **pH-Value, Conc. Solution** | No information available. |
| **pH-Value, Diluted solution** | No information available. |
| **Melting point** | 850.00 °C |
| **Initial boiling point and boiling range** | No information available. |
| **Flash point** | No information available. |
| **Evaporation rate** | No information available. |
| **Flammability state** | No information available. |
| **Flammability limit - lower(%)** | No information available. |
| **Flammability limit - upper(%)** | No information available. |
| **Vapour pressure** | No information available. |

| | |
|---|---|
| **Vapour density (air=1)** | No information available. |
| **Relative density** | No information available. |
| **Bulk density** | 400 kg/m³. |
| **Solubility** | Insoluble in water. |
| **Decomposition temperature** | No information available. |
| **Partition coefficient; n-Octanol/Water** | No information available. |
| **Auto ignition temperature (°C)** | No information available. |
| **Viscosity** | No information available. |
| **Explosive properties** | Not classified as explosive. |
| **Oxidising properties** | No information available. |

### 9.2 Other information

| | |
|---|---|
| **Molecular weight** | No information available. |
| **Volatile organic compound** | No information available. |
| **Other information** | None noted. |

## Section 10: Stability and reactivity

### 10.1 Reactivity

| | |
|---|---|
| **Reactivity** | No reactivity under normal conditions. |

### 10.2 Chemical stability

| | |
|---|---|
| **Stability** | Stable under normal temperature conditions and recommended use. |

### 10.3 Possibility of hazardous reactions

| | |
|---|---|
| **Hazardous reactions** | Product is not dust explosive in its delivered form. |
| **Hazardous polymerisation** | Will not polymerise. |
| **Polymerisation description** | Not applicable. |

### 10.4 Conditions to Avoid

| | |
|---|---|
| **Conditions to avoid** | Avoid moisture, heat, flames and sparks. |

### 10.5 Incompatible materials

| | |
|---|---|
| **Materials to avoid** | Keep away from incompatibles such as oxidizing agents. |

### 10.6 Hazardous decomposition products

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|---|---|
| **Hazardous decomposition products** | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. |

## Section 11: Toxicological information

### 11.1 Information on toxicological effects

| | |
|---|---|
| **Toxicological information** | The product contains no fibres of less than 3 µm in diameter, which are suspected of having carcinogenic potential. Loose glass fibres from damaged packages may cause temporary skin irritation in sensitive persons. |
| **Acute toxicity (Oral LD50)** | No information available. |

| | |
|---|---|
| **Acute toxicity (Dermal LD50)** | No information available. |
| **Acute toxicity (Inhalation LD50)** | No information available. |
| **Serious eye damage/irritation** | Product is not classified as an eye irritant, however high dust levels in air may cause eye irritation. |
| **Skin corrosion/irritation** | No information available. |
| **Respiratory sensitisation** | No information available. |
| **Skin sensitisation** | No information available. |
| **Germ cell mutagenicity** | No information available. |
| **Carcinogenicity** | No information available. |
| **Specific target organ toxicity - Single exposure:** | |
| **STOT - Single exposure** | No information available. |
| **Specific target organ toxicity - Repeated exposure:** | |
| **STOT - Repeated exposure** | No information available. |
| **Inhalation** | High dust levels may irritate the respiratory system. |
| **Ingestion** | Ingestion may cause nausea and irritation to the mouth, throat and digestive system. |
| **Skin contact** | May cause mechanical irritation or abrasion. May cause temporary irritation in sensitive individuals. |
| **Eye contact** | Dust may cause mechanical irritation. |
| **Waste management** | When handling waste, consideration should be made to the safety precautions applying to handling of the product. |
| **Routes of entry** | No information available. |
| **Target organs** | Eyes, skin, respiratory system. |
| **Aspiration hazards:** | No information available. |
| **Reproductive toxicity:** | No information available. |

## Section 12: Ecological information

### 12.1 Toxicity

| | |
|---|---|
| **Acute toxicity - Fish** | No information available. |
| **Acute toxicity - Aquatic invertebrates** | No information available. |
| **Acute toxicity - Aquatic plants** | No information available. |
| **Acute toxicity - Microorganisms** | No information available. |
| **Chronic toxicity - Fish** | No information available. |
| **Chronic toxicity - Aquatic invertebrates** | No information available. |
| **Chronic toxicity - Aquatic plants** | No information available. |
| **Chronic toxicity - Microorganisms** | No information available. |
| **Ecotoxicity** | The product components are not classified as environmentally hazardous. |
| **Eco toxilogical information** | No ecological toxicity available on the overall finished product. |

### 12.2 Persistence and degradability

| | |
|---|---|
| **Degradability** | The product is not readily biodegradable. |
| **Biological oxygen demand** | No information available. |
| **Chemical oxygen demand** | No information available. |

### 12.3 Bioaccumulative potential

| | |
|---|---|
| **Bioaccumulative potential** | No data available on bioaccumulation. |
| **Bioaccumulation factor** | No information available. |
| **Partition coefficient; n-Octanol/Water** | No information available. |

### 12.4 Mobility in soil

| | |
|---|---|
| **Mobility** | Not soluble in water. |

### 12.5 Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** No component classified as PBT / vPvB substance.

### 12.6 Other adverse effects

**Other adverse effects** None known.

## Section 13: Disposal considerations

**Waste management** When handling waste, consideration should be made to the safety precautions applying to handling of the product.

### 13.1 Waste treatment methods

**Disposal methods** Dispose of waste and residues in accordance with local authority requirements.

## Section 14: Transport information

### 14.1 UN number

**UN no. (ADR)** Not applicable.
**UN no. (IMDG)** Not applicable.
**UN no. (IATA)** Not applicable.

### 14.2 UN proper shipping name

**ADR proper shipping name** Not applicable.
**IMDG proper shipping name** Not applicable.
**IATA proper shipping name** Not applicable.

### 14.3 Transport hazard class(es)

**ADR class** Not applicable.
**IMDG class** Not applicable.
**IATA class** Not applicable.

**Transport labels**

### 14.4 Packing group

**ADR/RID/ADN packing group** Not applicable.
**IMDG packing group** Not applicable.
**IATA packing group** Not applicable.

### 14.5 Environmental hazards

**ADR** No
**IMDG** No
**IATA** No

### 14.6 Special precautions for user

**EMS** Not applicable.
**Emergency action code** Not applicable.
**Hazard no. (ADR)** Not applicable.
**Tunnel restriction code** Not applicable.

### 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

**EU legislation** 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. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006. |
| **Approved code of practice** | Workplace Exposure Limits Guidance Note EH40/2005. |
| **Chemical safety assessment** | No chemical safety assessment has been carried out. |

## Section 16: Other information

| | |
|---|---|
| **General information** | This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010. |
| **Revision comments** | This is a first issue. |
| **Revision date** | 14 November 2017 |
| **Revision** | 1 |
| **Safety data sheet status** | Approved. |

**Hazard statements in full**

**Disclaimer**

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