

MATERIAL SAFETY DATA SHEET

As of January 2020, in compliance with regulation (EC) Nr. 1907/2006, regulation (EC) 1272/2008 and regulation (EC) 453/2010

OLIVINE SAND

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name	Olivine sand
REACH-Registration No.	Exempted in accordance with Annex V.7
Synonyms	Olivine sand, Olivine flour, Magnesium iron silicate

Relevant Identified uses of the substance or mixture and uses advised against

Main applications Blasting abrasives
(non-exhaustive list)

Details of the supplier of the safety data sheet

MICROBEADS AG Wambisterstrasse 1a CH-5412 Gebenstorf SWITZERLAND	Phone +41 56 441 16 11 Fax +41 56 441 55 15	info@microbeads-ag.ch www.microbeads-ag.ch
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Emergency phone no.

Sales Department MICROBEADS AG CH-5412 Gebenstorf	Phone +41 56 441 16 11 <i>This number is only available during the following office hours: Mon-Thu: 8 am-4 pm., Fri: 8 am-1 pm.</i>
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

This product does not meet the criteria for classification as hazardous as defined in the regulation EG 1272/2008 and in directive 67/548/EEG.

Depending on the type of handling and use (e.g. grinding, drying) airborne respirable dust may be generated. Prolonged and/or massive inhalation of respirable dust may cause mucous membrane and respiratory irritation and lung injury. Principal symptoms are shortness of breath and reduced pulmonary function. Occupational exposure to respirable dust should be monitored and controlled.

This product should be handled with care to avoid dust generation.

Regulation EG 1272/2008

No classification

Classification EU (67/548/EEG)

No classification

Label elements

None

Other hazards

This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<i>Main constituent</i>	Olivine
<i>Amount</i>	Olivine, 100 %
<i>CAS</i>	1317-71-1
<i>EINECS</i>	215-281-7
<i>Impurities</i>	None

FIRST AID MEASURES

Eye contact

Rinse with copious quantities of water and seek medical attention if irritation persists.

Inhalation

Movement of the exposed individual from the area to fresh air is recommended.

Ingestion

No first-aid-measures required.

Skin contact

No special first aid measures necessary.

Most important symptoms and effects both acute and delayed

No acute and delayed symptoms and effects are observed.

Indication of any immediate attention and special treatment needed

No Special actions are required.

5. FIRE-FIGHTING MEASURES

Extinguishing media

No specific extinguishing media is needed.

Special hazards arising from the substance or mixture

Non-combustible. No hazardous thermal decomposition.

Advice for fire fighters

No specific fire fighting protection is required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid airborne dust generation, wear personal protective equipment in compliance with national legislation.

Environmental precautions

No special requirements.

Methods and material for Containment and cleaning up

Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation.

Reference of other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier.

Do not eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities

Technical measures/precautions

Minimise airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

Specific end use(s)

If you require advice on specific uses, please contact your supplier.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust).

The OEL (Occupational Exposure Limit) for respirable dust is 4 mg/m³ in UK, measured as an 8 hour TWA (Time Weighted Average). For the equivalent limits on other countries, please consult a competent occupational hygienist or the local regulatory authority.

Exposure controls

Appropriate engineering controls

Minimise airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organisational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

Individual protection measures, such as personal protective equipment

Eye / face protection Wear safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries.

Skin protection No specific requirement. For hands, see below. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

Hand protection Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

Respiratory protection In case of prolonged exposure to airborne dust concentrations, wear respiratory protective equipment that complies with the requirements of European or national legislation.

Environmental exposure controls Avoid wind dispersal.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Pale-green powder, granular particles or aggregates

Grain shape Sub-angular

Odour Odourless

<i>Odour threshold</i>	Not relevant
<i>pH (400 g/l water at 20 °C)</i>	8,9 to 9,5
<i>Melting range</i>	1400-1700 °C
<i>Specific Density</i>	3,3 g/cm ³
<i>Solubility in water</i>	Negligible
<i>Solubility in hydrofluoric acid</i>	Yes

Other Information

<i>Angle of repose</i>	approx. 45°
<i>Stowage factor</i>	0,54 m ³ (19 ft ³ /t)

10. STABILITY AND REACTIVITY

<i>Reactivity</i>	Inert, not reactive
<i>Chemical stability</i>	Chemically stable
<i>Possibility of hazardous reactions</i>	No hazardous reactions
<i>Conditions to avoid</i>	Not relevant
<i>Incompatible materials</i>	No particular incompatibility
<i>Hazardous decomposition products</i>	Not relevant

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/Irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Toxicity

Not relevant.

Persistence and degradability

Not relevant.

Bio accumulative potential

Not relevant.

Mobility in soil

Negligible

Results of FBI- and vPvB-assessment

Not relevant.

Other adverse effects

No specific adverse effects known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Where possible, recycling is preferable to disposal. Can be disposed of in compliance with local regulations.

Packaging

Dust information from residues in packaging should be avoided and suitable worker protection assured. Store used packaging in enclosed receptacles. Recycling and disposal of packaging should be carried out in compliance with local regulations. The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.

14. TRANSPORT INFORMATION

UN Number

Not relevant

UN proper shipping name

Not relevant

Transport hazard classes

ADR: Not classified

IMDG

Not classified

ICAO/IATA

Not classified

RID

Not classified

Packing group

Not relevant

Environmental hazard

Not relevant

Special precautions for user

No special precautions

Transport in bulk according to Annex II of MARPOL 73/78 und the IBC Code

Group C

15. REGULATORY INFORMATION

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

National legislation/requirements

International legislation/requirements

Regulation 1907/2006 (REACH): Exempted, according to art. 2 paragraph 7.

European directive on dangerous substance 67/548: No classification.

European community labelling: no labelling.

Chemical safety assessment

Exempted from REACH registration in accordance with Annex V.7.

16. OTHER INFORMATION

Indication of the changes made to the previous version of the SDS

In compliance with regulation (EC) 1907/2006, regulation (EC) 1272/2008 and regulation (EC) 453/2010.

General product information

Olivine sand is produced from the rock dunite. In the rock small amounts of fibrous minerals can be found, first of all in the mineral group of in silicates such as pyroxene and amphiboles. A normal element analysis (chemical) reports the nickel content as NiO and may therefore be misleading in showing the form nickel appears in the product. In olivine, nickel is relative strongly bounded in the silicate lattice and thus not bio-available.

16. OTHER INFORMATION

Third party materials

Insofar as materials not manufactured or supplied by producer are used in conjunction with, or instead of producer materials, it is the responsibility of the customer himself to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of producer olivine in conjunction with materials from another supplier.

Liability

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

Training

Workers must be trained in the proper use and handling of this product as required under applicable regulations.