



Note: Non hazardous material, therefore it is not necessary to provide you with a safety data sheet according to Article 31 of the EC Regulation 1907/2006 (REACH).

1. Identification of the substance / the preparation / the product and identification of the company

1.1 Identification of the substance / the preparation / the product

Trade Name: **SiLibeads – Glass beads for Roadmarking**

1.2 Application of the substance / the preparation / the product

To be used as: Reflection beads for road marking, specially to improve the visibility at night in case of rain

1.3 Company identification

Manufacturer / Supplier: Sigmund Lindner GmbH
Oberwarmensteinacher Str. 38
D-95485 Warmensteinach
Phone: (+49) 09277-9940
Fax: (+49) 09277-99499
Web: www.sili.eu
E-Mail: reach@sigmund-lindner.com

Information provided by: Mr. Michael Dressler (Quality and Innovation)
Mr. Reinhold Schneider (Quality Assurance)

1.4 Emergency Call

Emergency information: Phone: (+49) 09277-9940

This telephone number can be reached during Office Hours (MEZ):

Monday - Thursday: 7.00 AM - 4.30 PM

Friday: 7.00 AM – 1.00 PM

2. Possible dangers

Classification: It does not have to be labelled according to the Preparation Guideline, respectively EU-directives 67/548/EWG or 1999/45/EG.

Additional danger advice: In case of inappropriate handling different kinds of injuries (cuts) are possible - keep away from children!
Risk of slipping due to spillage of product!

It is not necessary that the product has to be labelled according EU-directives or national laws.



3. Composition / detailed information on the ingredients

3.1 Chemical characteristics

Description: Beads made of Soda lime glass
CAS# 65997-17-3
EINECS# 266-046-0

3.2 Ingredients

Name	Symbol, R-/S-phrases	Weight in %	CAS-No.	EG-No. (EINECS)	REACH Reg.No.
main components		reference value			
Silicon dioxide SiO ₂	amorphous, no hazardous substance	73,20 %	7631-86-9	231-545-4	----
Sodium oxide Na ₂ O	C; R14-34	12,80 %	1313-59-3	215-208-9	----
Calcium oxide CaO	Xi, R37-38-41	8,66 %	1305-78-8	215-138-9	----
Magnesium oxide MgO	no hazardous substance	3,58 %	1309-48-4	215-171-9	----
Aluminium oxide Al ₂ O ₃	no hazardous substance	0,95 %	1344-28-1	215-691-6	----
further					

4. First-aid measures

General Advice: Remove soiled Clothes

After Inhalation: Provide fresh air.

After Skin Contact: Clean Skin with water and soap.

After Eye Contact: Remove particle carefully from the affected eye. If need be, remove contact lense. Rinse eye thoroughly with plenty of water. Consult a physician if needed.

After Swallowing: Consult a physician after swallowing large quantities.

Advise to the physician: Decontamination and symptomatic treatments are in most cases sufficient.



5. Fire fighting actions

Suitable extinguishing agents:	The product itself is neither combustible nor explosive. extinguishing agents has to be coordinated with the surrounding fire.
For safety reason unsuitable extinguishing agents:	largely unknown
Special dangers:	no information available
Special protective equipment:	protective equipment has to be coordinated with surrounding fire

6. Measures by accidental release

Personal protection:	Avoid the build up of dust. Do not inhale any dust.
Environmental measures:	It is not necessary to take actions in respect of product. Disposal has to be done as specified in chapter 13.
Cleaning procedures and absorption:	Dry absorption and if possible re-utilisation of the material.

7. Handling and storage

7.1 Handling

Safety advice:	High risk of slipping due to spillage of product. Avoid dust.
Technical protective measures:	No data available. The product itself is neither combustible nor explosive.

7.2 Storage

Requirements for storage in rooms and containers:	No special storage necessary. Store in tightly closed (original) containers.
Joint storage:	No specially known incompatible materials
Storage class:	LGK 13 (non-flammable solid materials)

8. Exposure limits and personal protection

8.1 Exposure limits

The applicable limits which are to be complied with and monitored, particularly during mechanical processing with a risk of dust:

Parameter	CAS-Number	EINECS	Value	Type of limit
General dust limit	----	----	10 mg/m ³ E 3 mg/m ³ A	Limit at work (AGW) according to the TRGS 900 Regulation
Silica, amorphous (Silicon dioxide)	7631-86-9	231-545-4	4 mg/m ³ E	Limit at work (AGW) according to the TRGS 900 Regulation
Aluminium in Urine	7429-90-5	231-072-3	200 µg/l	biological limit (BGW) according to TRGS 903, sampling is done at the end of shift
				E = breathable dust A = alveolar dust

8.2.1 Exposure limits and monitoring in the workplace

An on-site extraction system is required in the event of gathered dust and thermal pollution from the product.

Respiratory protection:



Use respiratory protection in the event of dust exposure, e.g. a P1 dust mark that conforms to EN 143 or a half mask with particle filter FFP1 or PP2 conforms to EN 141. Caution! Limited wearing period.

Hand protection:



Protective gloves are generally not required. However, for constant skin contact it is necessary to use gloves of low mechanical and special material demands, e.g. Material: Mat. thickness Penetration time:
Butyl rubber min. 0.4 mm min. 30 min. acc. to EN 374

Eye protection:



Side-shielded safety goggles that conform to EN 166 are required when carrying out mechanical processing with exposure to dust.

Body protection:

Generally, normal working clothes are sufficient.

General work protection and hygiene measures:

Do not inhale dust. Avoid contact with eyes, skin and clothes. Do not eat, drink, smoke or snuff during work. Wash hands prior to breaks and after finishing work. Change soiled clothes. Protect skin by using e. g. skin lotions and -creams.

8.2.2 Restrictions and monitoring of the environmental exposure

There are no known properties of the product, that pose dangers to the environment. General operational measures are sufficient to protect the environment.

9. Physical and chemical properties

9.1 General details

Physical condition:	solid
Shape:	beads
Odour:	odourless
Colour:	transparent

9.2 Important details regarding health- / environmental protection as well as safety

pH value:	Non-applicable
Melting point:	1446 °C
Softening point (Littleton point):	734 °C (10 ^{7,65} dPas)
Transformation temperature:	549 °C
Self-ignition point (Solid/Gas):	Non-applicable
Blaze properties:	Non-applicable
Risk of explosion:	Non-applicable
Vapour pressure:	Non-applicable
Specific weight:	2.50 kg/dm ³
Bulk density:	1.47 – 1.52 kg/dm ³ (dependent upon diameter)
Water solubility:	Insoluble in water
Partition coefficient n-Octanol/ water:	Non-applicable
Viscosity:	Non-applicable
Vapour density:	Non-applicable
Evaporation speed:	Non-applicable

9.3 Additional details

There are no further details required regarding safety-relevant parameters.

10. Stability and reactivity

In case of appropriate handling and storage no dangerous reactions will occur.

10.1 Chemical resistance according to the DIN norm (tested on glass beads)

Hydrolytic class	HGB 1	(DIN ISO 719)
Acid class	S 2	(DIN 12116)
Alkali class	A 1	(DIN ISO 695)

11. Toxicological data

There is no toxicological data available.



12. Environmental details

Ecological respectively ecotoxicological data is not available.

13. Disposal information

No waste is produced from the product, that would require special supervision according to the German "Closed Substance Waste Management Act" (Krw/-AbfG) respectively EU-directives 91/689/EWG and 2006/12/EG.

13.1 Product

Re-use product remainders again if possible

13.2 Uncleaned Packaging

Recommendation: Packaging can be used again if not contaminated. Cleaning agent: water

14. Transport details

Non-hazardous materials in terms of ADR/GGVS, RID/GGVE, ICAO/IATA, IMDG.

15. Legal regulations

15.1 EU Regulations

Classification and labelling: None in accordance to the EU Directive 67/548/EWG (substance directive), 1999/45/EC (dangerous preparation directive) or in accordance to any other known EU regulations.

15.2 National Regulations (UK)

Classification and labelling: The product is not due to labelling according to UK regulations.

Other UK regulations and guidances:

- Health and Safety at Work Act 1974.
- The Management of Health and Safety at Work regulations 1992.
- L5 Control of substances hazardous to Health. The Control of Substances Hazardous to Health Regulations 2002.
- Approved codes of practice and guidance.
- Guidance Note EH40 - Occupational Exposure Limits.

16. Additional information

16.1 Summary of the Risk-/Safety-Phrases (chapters 3.2) (rating of independent substances)

R14	Reacts violently with water.
R34	Causes chemical burns.
R37	Irritation to respiratory system.
R38	Irritation to skin
R41	Risk of serious damage to eyes.

16.2 Recommended Limitations of Use

SiLibeads are not a toy and must therefore be stored away from children. A resale as toy requires the EC conformity evaluation and the distributor's compliance with the legal regulations. We expressly point out, that a conformity evaluation in this sense has not been carried out by us.

16.3 Further information

Company details: Sigmund Lindner GmbH
Oberwarmensteinacher Str. 38
D-95485 Warmensteinach
Phone: (+49) 09277-9940
Fax: (+49) 09277-99499
Web: www.sili.eu

Technical contacts: Mr. Michael Dressler (Quality and Innovation)
information Mr. Reinhold Schneider (Quality Assurance)

All details noted in this data sheet correspond to our knowledge at the time this data sheet has been put into effect. This information should be used as a guideline for a safe treatment in accordance with the products mentioned in our material safety data sheet, during storage, production, transport and disposal. This information is not applicable to other products, to newly produced materials, if the product mentioned in this material safety data sheet is mixed or blended with other articles or when other transformations are made to it.

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