

Product Data Sheet
 First created on: 2017-02-14
 Next inspection on: 2018-12-31

 Updated on: 2018-01-04
 Printed on: 2018-01-04

Product	SiLibeads Glass beads Type SL
Material	Aluminium-Borosilicate Glass beads Specific weight: 2.59 kg/l Hydrolytic resistance on Glass beads: HGB 1 (based on DIN ISO 720) Acidic resistance on Glass beads: S4 (according to DIN 12116) Alcaline resistance on Glass beads: A1 (according to DIN ISO 695)
Application	Grinding media for all sorts of pearl mills for the grinding and dispersion of products with special quality requirements such as magnetic bands coating for audio- and video tapes, anti-corrosion lacks, pH-sensitive suspensions and the grinding of the coatings for thermo-paper of fax machines.
Technische Daten	
Roundness	≥ 0.95 (ratio width/length (x_{\min}/x_{\max}))
Compressive strength	up to 2500 N (belonging to diameter)
Refractive index	1.54
Size (Diameter)	from 0.50 up to 4.40 mm (see table Standard Sizes)
Transformation temperature	785 °C
Softening point (Littleton point)	923 °C
Melting point	1466 °C
Specific thermal Conductivity	1.127 W/km
Thermal expansion	$5.13 \cdot 10^{-6} \text{ K}^{-1}$ [20 °C] (Coefficient of linear expansion α)
Specific thermal capatcity	1.317 kJ/kg K [>600 °C]
Youngs-Module	77 GPa
Hardness according to Mohs	≥ 6

Assessment acc. to Food Legislation

The Glass beads are a consumer good in the sense of §2 clause 6 no. 1 German Code for Food Stuff (LFGB), Commodities and Feeding Stuff. Therefore they have to comply with the legal requirements.

The Glass beads comply with the requirements § 31 of the German Food and Feed Code (LFGB) and of the European Food Regulation 1935/2004/EC, Article 3.

The heavy metal content of the Glass beads keeps the permitted limits of EU directive 2011/65/EC (RoHS).

Lead < 1000 ppm	Cadmium < 100 ppm	Chrome VI < 1000 ppm	Mercury < 1000 ppm
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Standard Sizes (special diameters by request)				
Article	Diameter	Resistance to compression *)	Bulk density	Amount (pieces per kg)
7502	0.50 – 0.80 mm		1.55 kg/l	3.020.370
7503	0.75 – 1.00 mm		1.54 kg/l	1.100.710
7504	1.00 – 1.40 mm	250 – 400 N	1.53 kg/l	426.730
7505	1.30 – 1.70 mm	375 – 550 N	1.53 kg/l	218.480
7507	1.70 – 2.10 mm	550 – 775 N	1.53 kg/l	107.500
7508	2.00 – 2.60 mm	750 – 900 N	1.53 kg/l	64.730
7510	2.50 – 3.00 mm	900 – 1450 N	1.53 kg/l	35.450
7511	2.90 – 3.50 mm	1400 – 1750 N	1.52 kg/l	24.750
7512	3.30 – 3.90 mm	1725 – 2200 N	1.51 kg/l	15.800
7513	3.90 – 4.40 mm	2150 – 2500 N	1.50 kg/l	10.310

*) Resistance to compression: internal test with Compressive strength inspector No. 10004.1, Company Hegewald & Peschke

Chemical Analysis; Glass beads made of Aluminium-Borosilicate Glass; CAS-Nr. 65997-17-3 / EINECS 266-046-0				
Name	Method	Weight (Reference values)	CAS-No.	EINECS
Silicon dioxide SiO ₂	DIN 51001	55.00 %	7631-86-9	231-545-4
Calcium oxide CaO	DIN 51001	19.30 %	1305-78-8	215-138-9
Aluminium oxide Al ₂ O ₃	DIN 51001	13.40 %	1344-28-1	215-691-6
Boric oxide B ₂ O ₃	DIN 51086-1	6.50 %	1303-86-2	215-125-8
Magnesium oxide MgO	DIN 51001	4.20 %	1309-48-4	215-171-9
further		1.60 %		

Additional Information	
Storage indication	Store in a dry manner in closed (original) container by room temperature.
Disposal	Please consult national laws and local regulations in force for disposal or landfill.
Safety advice	High risk of slipping due to spillage of product
Product information	Sample card ... glass beads for technical applications, Safety Data Sheet SiLibeads Type SL; Test Reports
Manufacturer/Supplier	Sigmund Lindner GmbH; Oberwarmensteinacher Strasse 38; 95485 Warmensteinach / GERMANY Phone: +49-9277-9940 Fax: +49-9277-99499 Web: www.sili.eu E-Mail: sili@sigmund-lindner.com

All data are reference values – subject to change without prior notice