



Product Data Sheet

First creation on: 27.07.2011 Updated on: 27.07.2011
 Next inspection on: 27.07.2012 Printed on: 27.07.2011

Product	SiLibeads Glass beads
Material	Polished glass beads made of soda lime glass Specific weight: 2,50 kg/l Hydrolytic resistance on glass beads: HGB 1 (based on DIN ISO 719) Acid resistance on glass beads: S2 - S3 (according to DIN 12116) Alkali resistance on glass beads: A1 - A2 (according to DIN ISO 695)
Fields of application	Glass beads are used as back-up and borehole filter material
Major Advantages of SiLibeads Glass beads	<ul style="list-style-type: none"> • Highest possible effective pore space through exact particle size and spherical shape • Optimal adaption of filter openings due to single grain filling of glass beads • Pump cleaning is not necessary • No disinfection before installation • Minimal, smooth surface leads to a deceleration of lead and manganese contamination • An optimal regeneration through large pore spaces No subsequent subsidences • Thanks to a high flowability it is possible to the fill the glass beads also in narrow spaces without danger of hang • Higher material strength of the glass beads in relation to the flint quartz • During camera researches within filter wire pipes impurity, contaminat or sedimentation of iron ochre are very good visible
Technical Data	
Sizes	See table of standard sizes
Transformation temperature	542 °C
Softening point (Littleton point)	719 °C
Melting point	1.441 °C
Specific thermal Conductivity	1,129 W/km
Hardness according to Mohs	≥ 6

All datas are reference values

Chemical Analysis; Glass beads made of soda lime glass; CAS-Nr. 65997-17-3 / EINECS 266-046-0				
Name	Method	Weight (reference values)	CAS-No.	EINECS
Silicon dioxide SiO ₂	DIN 51001	66,0 - 73,0 %	7631-86-9	231-545-4
Sodium oxide Na ₂ O	DIN 51001	13,0 - 14,5 %	1313-59-3	215-208-9
Calcium oxide CaO	DIN 51001	8,0 - 9,2 %	1305-78-8	215-138-9
Aluminium oxide Al ₂ O ₃	DIN 51001	max: 3,2 %	1344-28-1	215-691-6
Magnesium oxide MgO	DIN 51001	max. 4,2 %	1309-48-4	215-171-9

<p>Assessment acc. To Food Legislation</p> <p>The tested Glass beads are a consumer good in the sense of §2 Abs. 6 No. 1 German Code for Food Stuff (LFGB), Commodities and Feeding Stuff. Therefore they have to comply with the legal requirements.</p> <p>The Glass beads comply with the requirements of §31 LFGB and article 3 of the European regulation No. 1935/2004/EC.</p>	
The heavy metal content of the Glass beads keeps the permitted limits of RoHS	
SiLibeads fulfill the micro biological requirements according to DIN EN ISO 14698-1 and VDI 6022	

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Standard sizes (Other diameters and tolerances are available on inquiry)

Article	Diameter	Bulk density	Pieces per kg (Reference values)	Burst strength (Reference values)	Roundness ^{*)} (Nominal values)
Typ S, Art. 4501	0,25 – 0,50 mm	1,51 kg/l	14.486.600	---	0,94
Typ S, Art. 45015	0,40 – 0,60 mm	1,50 kg/l	6.111.500	---	0,93
Typ S, Art. 4502	0,50 – 0,75 mm	1,49 kg/l	3.129.100	---	0,95
Typ S, Art. 4503	0,75 – 1,00 mm	1,48 kg/l	1.140.300	170 N	0,93
Typ S, Art. 4504	1,00 – 1,30 mm	1,47 kg/l	502.300	250 N	0,95
Typ S, Art. 4505	1,25 – 1,65 mm	1,47 kg/l	250.580	370 N	0,93
Typ S, Art. 4506	1,55 – 1,85 mm	1,47 kg/l	155.490	520 N	0,93
Typ S, Art. 4507	1,70 – 2,10 mm	1,47 kg/l	111.370	620 N	0,95
Typ S, Art. 4508	2,00 – 2,40 mm	1,47 kg/l	71.740	770 N	0,95
Typ S, Art. 4510	2,40 – 2,90 mm	1,47 kg/l	41.050	920 N	0,95
Typ S, Art. 4511	2,85 – 3,45 mm	1,46 kg/l	24.440	1.270 N	0,95
Typ S, Art. 4512	3,40 – 4,00 mm	1,46 kg/l	15.080	1.550 N	0,95
Typ S, Art. 4513	3,80 – 4,40 mm	1,45 kg/l	11.080	1.900 N	0,95
Typ S, Art. 4514	4,70 – 5,30 mm	1,45 kg/l	6.040	2.350 N	0,94
Typ S, Art. 4515	5,60 – 6,30 mm	1,45 kg/l	3.500	3.150 N	0,92
Typ M, Art. 5016	9,50 – 10,50 mm	1,45 kg/l	760	6.000 N	0,99
Typ M, Art. 5017	10,50 – 11,50 mm	1,45 kg/l	570	7.500 N	0,99
Typ M, Art. 5018	11,50 – 12,50 mm	1,45 kg/l	440	10.500 N	0,98
Typ M, Art. 5021	13,50 – 14,50 mm	1,43 kg/l	270	13.200 N	0,99
Typ M, Art. 5023	15,50 – 16,50 mm	1,43 kg/l	180	16.500 N	0,98

*) simultaneous measurement of roundness through digital image processing (Retsch-Camsizer, value b/l3)

Conformity to EN 1423 / BS EN 1423 – Certificate No. 0780-CPD-85103

TÜV Rheinland LGA Bautechnik GmbH Glass has established through thorough examinations, that SiLibeads with article numbers 45015 to 4506 are conform to EN 1423:1997/A1:2003, which is the same as BS EN 1423:1998.

Exclusion of Silanes / Glycol / Epoxy

We hereby confirm that SiLi do not use Silanes, Glycol and Epoxy during complete production process (including washing, sieving etc.), as well as packaging.

Additional Information

Disposal	There is no type of waste that occurs due to the product that requires special supervision according to the German „Closed Substance Waste management Act“ respectively guideline 91/689/EEC and 2006/12/EC.
Safety advice	High risk of slipping due to spillage of the product
Product information	Sample card SiLibeads ... glass beads for technical applications Material safety data sheet SiLibeads; test reports

CertificationsAccording to
DIN EN ISO 9001:2008According to
HACCP-Standard
for glass beads in
contact with food
stuffs**Manufacturer/Supplier**

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