

Product Data Sheet



The German
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SiLibeads SOLID Micro Glass Beads

First created on: 2017-04-06 Updated on: 2019-03-04
Next inspection on: 2019-12-31 Printed on: 2019-03-04

Version: V5/2019

Produkt: SiLibeads SOLID Micro Glass Beads

Material: polished Glass beads made of soda lime glass
Specific weight: 2.50 kg/l
Hydrolytic: DIN ISO 720 HGB 3
Acidic class: DIN 12116 S 1
Alkaline class: DIN ISO 695 A 1

Application: Filling material in the chemical-, paper- and synthetic materials industry;
Filling material for the modification of the physical properties of thermoplast and duroplast;
Glass beads for shot peening of the surface of metal, plastics, ceramics and wood;
Decorative filling material in wall-papers and wall-plasters;
and further technical applications

Technical Data:

Roundness: ≥ 0.89 (ratio width/length (x_{\min}/x_{\max}))
Refractive index: 1.52
Size (Diameter): between 0 and 800 μm (see table Standard Sizes)
Transformation temperature: 549 °C
Softening point (Littleton point): 734 °C
Melting point: 1446 °C
Specific thermal Conductivity: 1.129 W/(m·K)
Thermal expansion: $9.05 \cdot 10^{-6} \text{ K}^{-1}$ [20 °C] (Coefficient of linear expansion α)
Specific thermal capacity: 1.329 kJ/kg K [>600 °C]
Youngs-Module: 63 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.

Chemical Analysis; Glass beads made of soda lime glass; CAS-Nr. 65997-17-3 / EINECS 266-046-0:

Name	Method	Weight	CAS-No.	EINECS
Silicon dioxide SiO ₂	DIN 51001	72.30 %	7631-86-9	231-545-4
Sodium oxide Na ₂ O	DIN 51001	13.30 %	1313-59-3	215-208-9
Calcium oxide CaO	DIN 51001	8.90 %	1305-78-8	215-138-9
Magnesium oxide MgO	DIN 51001	4.00 %	1309-48-4	215-171-9
further		1.50 %		

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 available by request:

Article	Diameter	Bulk density
5209	0 – 20 µm	0.70 kg/l
5210	0 – 50 µm	1.30 kg/l
5211	40 – 70 µm	1.33 kg/l
5212	70 – 110 µm	1.37 kg/l
5213	90 – 150 µm	1.40 kg/l
5214	100 – 200 µm	1.42 kg/l
5215	150 – 250 µm	1.43 kg/l
5216	200 – 300 µm	1.44 kg/l
5220	200 – 400 µm	1.45 kg/l
5223	300 – 400 µm	1.46 kg/l
5218	400 – 600 µm	1.47 kg/l
5219	400 – 800 µm	1.49 kg/l

Possible Silane-Coatings:

Si1	Gamma-Methacryloxypropyltrimethoxysilane
Si2	Gamma-Glycidoxypropyltrimethoxysilane
Si3	Gamma-Aminopropyltriethoxysilane
Si4	Gamma-Mercaptopropyltrimethoxysilane
Si5	n-Octyltriethoxysilane

Additional Information:

Storage indication: Store in a dry manner in closed (original) container by room temperature. When stored in unheated rooms at winter temperatures, the balls should be pre-heated for at least 72 hours before use.

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: Safety Data Sheet SiLibeads SOLID Micro Glass Beads; Test Reports

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