

Product Data Sheet



The German spirit of quality since 1854



SiLibeads Type TC 9.5

First created on: 2020-04-21
Next inspection on: 2021-12-31

Updated on: 2021-08-10
Printed on: 2021-08-10

Version: V3/2021

Product: SiLibeads Type TC 9.5

Material: Ceramic beads made of Tungsten Carbide with Zirconium Oxide / Yttrium stabilised

Properties: very high material density, high hardness and low wear

Technical Data:

Specific Weight $\geq 9.2 \text{ kg/dm}^3$

Bulk Density $\geq 5.7 \text{ kg/dm}^3$

Roundness ≥ 0.95 (ratio width/length (x_{\min}/x_{\max}))

Colour Grey

Advantages:

- Pure raw materials (free from Cobalt, Nickel, Chrome)
- Useable for high-grade grinding of inks, pigments, coatings
- Useable in wet grinding processes of high viscous suspensions
- Useable in high energy mills
- Resistant in water-based systems
- Environmentally friendly (less harmful than standard Tungsten carbide beads)

Standard Sizes:

Article	Diameter	Bulk density
9501-WC-ZY	0.08 – 0.13 mm	5.7 kg/dm ³
95015-WC-ZY	0.10 – 0.20 mm	5.7 kg/dm ³
95025-WC-ZY	0.20 – 0.30 mm	5.7 kg/dm ³
95035-WC-ZY	0.30 – 0.40 mm	5.7 kg/dm ³
9505-WC-ZY	0.40 – 0.60 mm	5.7 kg/dm ³
9507-WC-ZY	0.60 – 0.80 mm	5.7 kg/dm ³
9508-WC-ZY	0.70 – 0.90 mm	5.7 kg/dm ³
9511-WC-ZY	1.00 – 1.20 mm	5.7 kg/dm ³
9513-WC-ZY	1.20 – 1.40 mm	5.7 kg/dm ³

Special diameters and -fractions (by request)

Chemical Analysis; Tungsten Carbide - Yttrium stabilised Zirconium Oxide beads:

Name	Method	Weight	CAS-No.	EINECS
Tungsten carbide WC	DIN 51001	63.23 %	12070-12-1	235-123-0
Zirconiumoxide Yttrium stabilised ⁽¹⁾		36.47 %	64417-98-7	264-885-7
others		0.30 %		

⁽¹⁾ Solid solution phase, consisting of: Zirconiumdioxide ZrO_2 + Hafniumdioxide HfO_2 ⁽²⁾: 34.61 %; Yttriumoxide Y_2O_3 : 1.86 %
Analysis according to DIN 51001.

⁽²⁾ natural origin (residue from processing of raw material Zircon sand)

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

Lead < 1000 ppm

Cadmium < 100 ppm

Chrome VI < 1000 ppm

Mercury < 1000 ppm

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: Safety Data Sheet SiLibeads Type TC 9.5

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