

PCC Microsilica – Microsilica/Silica Fume(SiO₂)

CHEMICAL NAME Amorphous silicon dioxide

CAS NUMBER 69012-64-2

EINECS 273-761-1

FUNCTION • Cement additives

Ceramic and refractory products

TECHNICAL REQUIREMENTS

Parameter	Spec	Typical*
Silicon dioxide (SiO ₂) (diff.)	Minimum 94%	95.0 %
Elemental silicon (Si)	≤ 0.4 %	0.1 %
Chloride (CI-)	≤ 0.30 %	0.03 %
Sulphate (SO ₃)	≤ 2.0 %	0.3 %
Alkalis (Na ₂ O _{eqv})	≤ 2.0 %	1.0 %
Free CaO (CaO _{free})	≤ 1.0 %	< 0.01 %
Moisture when packed (378K)	≤ 3.0 %	0.2 %
Loss on ignition (LOI):		
- Undensified (1023K)	≤ 6.0 %	2.5 %
- Densified (1223K)	≤4.0 %	2.0 %
pH	-	6.0
Specific surface	15 - 35 m²/g	25.0 m ² /g
Activity Index	≥ 100.0 %	120.0 %
Particle size	< 10 %**	4.0 %**
(Primary particles > 45 μm)		
Bulk density when packed		
- Undensified	280-450 kg/m ³	320 kg/m ³
- Densified	500-700 kg/m ³	600 kg/m ³

^{*} Typical values are for guidance only

GENERAL DATA

Color:	grey, light grey
Odour:	odourless
Melting Point, °C:	1550 - 1570
Solubility (Water):	Insoluble/slightly soluble
Solubility (Organic solvents):	Insoluble/slightly soluble
Specific Gravity (water =1):	2.1 - 2.3

Information presented herein has been given in good faith and to the best of our current knowledge and experience. The compliance of the specific properties of the supplied product with the data given herein and its fitness for the intended purpose should be checked before the product is used. The producer reserved the right to modify the information presented herein as a result of technological development and improvement of the product by producer.

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^{**} Tested on undensified



PACKING

Big Bags with pallets

APPLICATION

- production of mortars and castables
- production of insulating materials
- production of ceramic and refractory products
- other industrial applications

ADDITIONAL INFORMATION

- PCC Microsilica is offered as Densified and Undensified
- PCC Microsilica EN (densified) can be used as a type II addition in concreate conforming to IST-EN 206:2013+A2:2021, or in mortars, grouts and other mixes

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