

Product Data Sheet

Microsilica (Silica Fume) — Undensified Grade 94U

Description

Description	Microsilica (Silica Fume) is an ultra-fine amorphous silicon dioxide powder, a by-product of silicon metal and ferrosilicon alloy production. It is a key ingredient in advanced low and ultra-low cement castables. It is highly reactive during sintering, which leads to improved ceramic bonding at reduced firing temperatures.
Applications	Microsilica is used in castables, gunning mixes, and other shaped and unshaped refractory materials. It is also widely used in high-performance concrete, grouts, and shotcrete applications.
Grade	Undensified (FLOWCAST equivalent)

Key Benefits

1. Improved flow – easier to cast
2. Improved particle packing – denser castables
3. Gelification (coagulation) in gunning mixes
4. Improved hot-strength properties
5. Enhanced durability and reduced permeability in concrete

Chemical Analysis & Physical Data

Chemical Composition (Weight %)

Parameter	Unit	Specification
SiO ₂	wt%	Min. 94.0 (typical)
C (Carbon)	wt%	Max. 3.0
Fe ₂ O ₃	wt%	Max. 0.4
CaO	wt%	Max. 1.2
MgO	wt%	Max. 0.8
K ₂ O	wt%	Max. 2.0
Na ₂ O	wt%	Max. 0.5
H ₂ O (when packed)	wt%	Max. 1.5

Physical Properties

Property	Specification
Loss on Ignition (LOI)	Max. 3.0%
Coarse Particles (>45µm)	Max. 2.0%
pH-value	5.0 – 8.5
Bulk Density (when packed)	250 – 400 kg/m ³
Specific Surface Area (BET)	15 – 25 m ² /g (typical)

* Test methods are available upon request.

Packaging

Packaging 600 kg Jumbo Bags (FIBC / Big Bags)
25 kg Small Bags (multi-wall paper / PE-lined)
Custom packaging available on request.

Storage & Handling

6. Avoid dust generation – use appropriate PPE when handling
7. Store material properly, protected from moisture and contamination
8. Keep bags sealed until point of use
9. Store in a dry, covered area away from direct sunlight

Disclaimer: The information provided in this document is based on our current knowledge and is intended as a general guide. Ochnology Solution Pvt. Ltd. reserves the right to modify specifications without prior notice. Buyers are advised to conduct their own testing for specific applications.

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