

Fumed Silica / Microsilica

Silica fume, also known as microsilica, fumed silica. When smelting ferrosilicon and industrial silicon (metal silicon), a large amount of highly volatile SiO₂ and Si gas is generated in the ore furnace. And the gas is rapidly oxidized after being discharged. Silica fume is formed after condensation and precipitation.

Microsilica is a by-product of large-scale industrial smelting. And the entire process needs to be recycled with dust-removing environmental protection equipment.

Features

- Appearance: gray or off-white powder
- Refractoriness: >1600°C
- Bulk density: 200 ~ 250 kg / cubic meter.
- Chemical composition: SiO₂
- Silica fume particle size: 80% or more of less than 1 μm, and an average particle diameter of 0.1-0.3 μm, which is a gray state.

Analysis Object(%)	Brand				
	WFS97#	WFS94#	WFS90#	WFS88#	WFS85#
SiO ₂	97.0	94.0	90.0	88.0	85.0
Al ₂ O ₃	1.0	1.0	2.0		
Fe ₂ O ₃	1.0	1.0	2.0		
CaO+MgO	1.0	1.0	2.0		
K ₂ O+Na ₂ O	1.0	1.5	2.0		
C	1.0	2.0	2.0	2.5	3.0
NaOH	1.0	3.0	3.0	4.0	4.5
PH	4.5-6.5	4.5-7.5	4.5-7.5	4.5-8.5	4.5-8.5
Sizeabove45um	1.5	2.0	2.0	2.0	5.0
Moisture	1.5				
M2/g	1.0	2.0	2.5	3.0	3.0

Fumed Silica / Micro Silica Application

1. Use of microsilica in concrete: The advantages of microsilica in concrete are very obvious. Fumed silica is capable of filling pores between cement particles. At the same time, a gel body is formed with the hydration product. It reacts with the alkaline material magnesia to form a gel. Improve the concrete's resistance to pressure and corrosion. At the same time, it has the function of preventing segregation and water retention.

2. As an additive to refractory materials. Micro silica can improve the compactness of cast refractories.