

TEBA SILICA FUME

WHAT IS TEBA SILICA FUME ?

Amorphous light grey silicon oxide powder, obtained by filtering the dust extracted from silicon and ferrosilicon production in an electric arc furnace.

In addition to its pozzolanic properties, SILICA FUME Concrete is also very good filler due to its particle size. These combined properties lead to an extended life expectancy in aggressive environments (resistance to chlorides, acids and sulfates) and improved strength.

1 Physical and chemical characteristics

Packaging	Bulk in trucks or in big-bags. Others packaging on request
Storage	Dry storage. Avoid contact with moisture.
Handling	Product totally amorphous. Material Safety Data Sheet available on request

Applications	Mortars, Concretes: High and Very High Performance Concretes, Shotcretes. Refractory castables. Fibre cements.
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Quality Control	Follows the ISO 9001 and/or EN 13263-1,2 and/or ASTM C1240 norms.
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Environment	Follows the ISO 14001 norm.
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Safety	Follows the OHSAS 18001 norm
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2 Physical and Chemical Properties

Form	Ultrafine amorphous powder (respirable dust). Dust forms agglomerates
Colour	Grey, off-white
Odour	Odourless
Melting Point (°C)	1550-1570
Solubility (Water)	Insoluble/Slightly soluble
Solubility (Organic solvents)	Insoluble/Slightly soluble
Specific Gravity (water =1)	2.2-2.3
Bulk density (kg/m ³)	approx. 150-700
Specific surface (m ² /g)	15-30
Particle size, mean (µm)	=0.15 (less than 0.1 % of primary particles > 45 µm)

4 ADVINTAGS:

- ✓ Increased modulus of elasticity
- ✓ Increased concrete service life
- ✓ Increased strength
- ✓ Reduced permeability thereby increasing durability
- ✓ Increased resistance to sulfate attack
- ✓ Increased resistance to alkali-silica reactivity

5 Physical and chemical Results:

Test Item	Unit	Result	Method/Standard No.
SiO ₂ content	%	91.3	ASTM
H ₂ O	%	1.02	ASTM
LOI	%	3.5	ASTM
Specific surface area	m ² /g	>18	ASTM
Pozzolanic activity index	%	116	ASTM

PSI: PRODUCT SAFETY INFORMATION

6. First Aid Measures

- Inhalation: Remove exposed person from dusty area. Fresh air.
- Skin contact: Wash contaminated skin with water and/or a mild detergent.
- Eye contact: Rinse eyes with water/saline solution. If discomfort persists, obtain medical attention
- Ingestion: Not applicable

7. Fire Fighting Measures

The product is not combustible and there is no inherent risk of explosion.

Extinguishing media: Not applicable Depending on surrounding fire.

6. Accidental Release Measures

Avoid exposure to dust of the product. Released material should be collected in suitable containers.