



Technical Data Sheet:

R-E-D Fume Refractory – 106 UM



R-E-D Fume Refractory 106 UM is an un-densified amorphous light gray silicon dioxide powder with a constant pH that has a low impurity level and is consequently perfectly adapted for refractory castables. Use of **R-E-D 106 UM** improves the mechanical properties, compressive strength, creep, modulus of rupture and durability (via permeability decrease).

Applications: Low and medium cement refractory, grout, castables, vibrated or self consolidating concrete (SCC).

Packaging: Bulk super-sacks, other packaging options are available upon request.

Storage: Dry storage. Avoid contact with moisture.

Safety: Product totally amorphous. Safety data sheet available upon request.

Quality Control: Complies with ISO 9001:2008 norm., ASTM C1240 and AASHTO M 307.

Environmental: Complies with ISO 14001:2000 norm.



Physical and Chemical Characteristics

ANALYSIS	Limits		
	TYPICAL	MIN	MAX
SiO ₂ (%)	95.00	92.50	98.10
Free C (%)	1.50	0.60	4.30
Free Si (%)	0.12	0.05	0.20
Total CaO (%)	0.42	0.19	1.60
SO ₃ (%) ²	0.20	<0.01 ²	0.70
Na ₂ O (%) ²	0.10	<0.01 ²	0.50
K ₂ O (%)	0.38	0.25	1.10
H ₂ O (%)	0.30	0.10	1.20
Al ₂ O ₃ (%) ²	0.11	<0.01 ²	0.50
Fe ₂ O ₃ (%) ²	0.12	<0.01 ²	0.50
MgO (%)	0.29	0.05	0.60
pH	7.80	6.75	8.80
Loss on Ignition (950° C during 1 hour) (%)	1.70	1.10	4.80
Specific Surface (BET) (M ² /g)	20.0	18.0	22.0
Bulk Density (lb/ft ³)	19.0	17.0	25.0
>45 μ (%)	2.20	0.50	8.00
Brightness L ¹	47	45	50

¹ % by weight of dry mass

² Lower limit detection

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