

Product Data Sheet

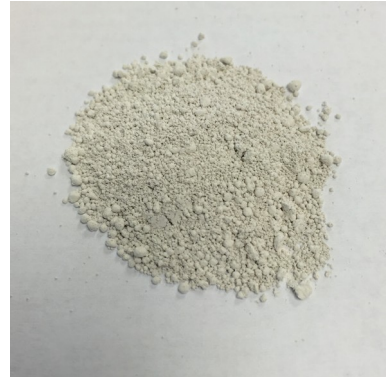
Alpha Silicon Nitride - E 95 Grades UM and M

Product Properties

Appearance at 25°C White/Grey powder

Grade UM Elemental Assay (mass fraction in %)

N	min. 38.0%
Fe	max. 0.02%
O	max. 1.5%
C	max. 0.6%
Al	max. 0.02%
Alpha phase content	min. 95.0%



Note: M elemental assay may change after milling

Physical Characteristics	M	UM
Specific Surface Area	12-15 m ² /g	1-4 m ² /g
Sintered Density	98.5 – 99.5 of TD	
Hardness (H):	14 to 15 GPa	
Fracture Toughness (KIC):	12 to 15 MPa/m ²	
Flexural Strength: average	812 MPa	

Sintered properties for the M Grade depend on customer RTSP recipe and final milled specific surface area.

E 95 Grade M	Particle Characterization (Coulter LS)		
Mean Diameter (N)	0.104	% Volume <1.0µm	99.90
Volume 3% Dia. µm (N)	0.045	% Volume <2.5µm	99.99
Volume 6% Dia. µm (N)	0.051	% Volume <3.5µm	100.00
Volume 50% Dia. µm (N)	0.087	% Volume <5.0µm	100.00
Volume 94% Dia. µm (N)	0.199	% Volume <20.0µm	100.00
Volume 97% Dia. µm (N)	0.250		

E 95 Grade UM	Particle Characterization (Coulter LS)		
Mean Diameter (N)	0.199	% Volume <1.0µm	6.29
Volume 3% Dia. µm (N)	0.043	% Volume <2.5µm	14.20
Volume 6% Dia. µm (N)	0.047	% Volume <3.5µm	18.60
Volume 50% Dia. µm (N)	0.086	% Volume <5.0µm	24.40
Volume 94% Dia. µm (N)	0.258	% Volume <20.0µm	86.60
Volume 97% Dia. µm (N)	0.359		

Regulatory Information

DOT/TDG Classification	Not Regulated
HMIS Code	1-0-0
CAS Number	12033-89-5
TSCA Inventory	Yes
WHMIS Classification	Not Regulated

Safety

For information on the safe handling of this product, please read the Material Safety Data Sheet prior to use of the product.

Handling and Storage

Locate in a closed container in a dry and non-draft area to avoid dust production.

Shipping Data

Product is available in various quantities. For product inquiries please contact sales@nuvosi.com.

Packaging

1 kg vacuum sealed bags

25 kg steel drums, polyethylene lined

Other packaging on request.

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