



Silicon Solutions.

### Specifications for Silicon Nitride (SicoNide™) Powder

Characteristics	Grade P95						Grade S95					
	P95H		P95M		P95L		S95H		S95M		S95L	
	Spec.	Typical	Spec.	Typical	Spec.	Typical	Spec.	Typical	Spec.	Typical	Spec.	Typical
<b>Si<sub>3</sub>N<sub>4</sub> Content (%)</b>	> 98	98.5	> 98	98.7	> 98	98.8	> 98	98.1	> 98	98.3	> 98	98.5
Impurities (%)												
Fe	< 0.06	0.05	< 0.06	0.05	< 0.06	0.05	< 0.3	0.25	< 0.3	0.25	< 0.3	0.25
Al	< 0.08	0.04	< 0.08	0.04	< 0.08	0.04	< 0.12	0.07	< 0.12	0.07	< 0.12	0.07
Ca	< 0.02	0.005	< 0.02	0.005	< 0.02	0.005	< 0.05	0.03	< 0.05	0.03	< 0.05	0.03
C	< 0.5	0.3	< 0.5	0.3	< 0.5	0.3	< 0.5	0.4	< 0.5	0.4	< 0.5	0.4
O <sub>2</sub>	< 1.5	1.3	< 1.3	1.0	< 1.2	1.0	< 1.5	1.3	< 1.3	1.0	< 1.2	1.0
Free Si	< 0.2	0.15	< 0.2	0.15	< 0.2	0.15	< 0.2	0.12	< 0.2	0.12	< 0.2	0.12
Halides	< 0.002	ND**	< 0.002	ND	< 0.002	ND	< 0.002	ND	< 0.002	ND	< 0.002	ND
α Phase (%)	> 91	93 - 95	> 91	93 - 95	> 91	93 - 95	> 92	94 to 97	> 92	94 to 97	> 92	94 - 97
BET Surface Area (m <sup>2</sup> /g)	10 to 12	11	8 to 10	8.5	6 to 8	7	10 to 12	11	8 to 10	8.5	6 to 8	7
Particle Size** (Approx.D <sub>50</sub> )	0.9	--	1.1	--	1.3	--	0.9	--	1.1	--	1.3	--

\* ND = Not Detectable (below 0.001)

\*\* Particle size measurement is an approximate value - it is expected to vary depending the measurement technique, dispersant and carrier liquid used for measurement. This value should not be used as an absolute measure.

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