VESTA CERAMICS

SICOMILL®
SILICON POWDER

Chemical Properties

Purity (typical analysis)

Element	Weight %			
	Grade 2		Grade 4	
	Typical	Max/min	Typical	Max/min
Si	98.6%		99.0%	
Fe	0.40	0.30-0.52	0.07	0.03-0.09
Al	0.15	0.08-0.20	0.07	0.05-0.11
Ca	0.05	0.03-0.08	≤0.01	≤0.02
C	<0.06	0.10	≤0.10	≤0.15
O*)	0.2-1.0	-	0.2-1.0	-

*) Oxygen content dependent on particle size distribution.

Physical Properties

Particle size distributions (typical analysis)

Size	Distribution (μm)			Cut off (μm)	Bulk density (g/cm³)		Surface area (m²/g;BET)
	d_{10}	d_{50}	d_{90}		apparent	tapped	
B	10	40	60	98% < 100 μm	1.0	1.4	0.4
C	3	11	25	98% < 30 μm	0.7	1.1	1.2
D	2	7	13	99.5% < 30 μm	0.6	0.9	2.1
E	1	4	8	99.9% < 20 μm	0.5	0.8	3.5

Particle size distribution is measured by laser instrument (Malvern).
Used parameters: presentation 5UHD, refractive index powder 3,1255.0,1.

Particle morphology

The SICOMILL® production system is based on the principle of fluid-energy milling in order to minimise contamination. A powder produced by this method has a morphology with relative sharp edges and a narrow particle size distribution.

VESTA Ceramics AB
Industriomr. 3, SE-840 10 Ljungaverk, Sweden
Cell phone +46 705 64 73 20. Fax +46 303 521 58. E-mail kent@vestaceramics.net
www.vestaceramics.net