

Alumina Al_2O_3 nanopowders

Our offer

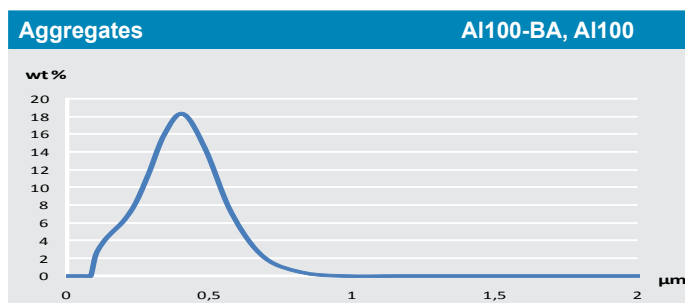
We offer two main types of alumina nanopowders: one with binding system (Al100-BA), one without (Al100). The powders are available in spray-dried granulates or slurries. Customized alumina nanopowders are available on demand, such as ultrapure alumina (99.99%), Ziconia Toughened Alumina, gamma alumina (5nm) or magnesia doped alumina.

Key Benefits

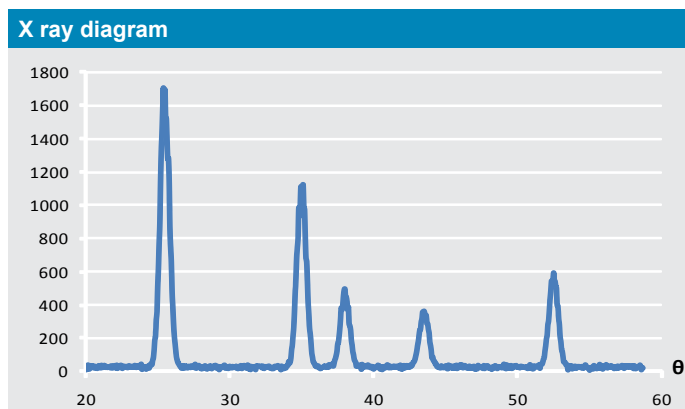
- Higher toughness
- Better wear resistance
- Extremely high hardness
- Higher breakdown electrical field
- Increased thermal shock resistance
- Can be used as an additive in micropowders

General Characteristic		Al100-BA	Al100
Binding System	-	Organic, PVA based	None
Average Particle Size	nm	150	150
Powder Density	g/cm3	1.3	1.3
Minimum Purity	%	99.9%	99.9%
Gamma Phase	%	0%	0%
Specific surface area	m2/g	7 ± 2	7 ± 2

Purity		Al100-BA, Al100
Al_2O_3	wt%	99.9%
SiO_2	ppm	< 30
CaO	ppm	< 175
K_2O	ppm	< 200
Fe_2O_3	ppm	< 20
Na_2O	ppm	< 20



Sintering		Al100-BA, Al100
Compaction Force	MPa	150
Green density	%	60%
Sintering temperature	°C	1500
Sintered density	g/cm3	> 3.95
Sintered grain size	nm	500
Elasticity modulus	GPa	390
Hardness (Vickers)	GPa	> 20
Abrasion resistance	nm/h	5
Fracture toughness	MPam ^{0.5}	3.84



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