

Alumina Al_2O_3 nanopowders

Our Offer

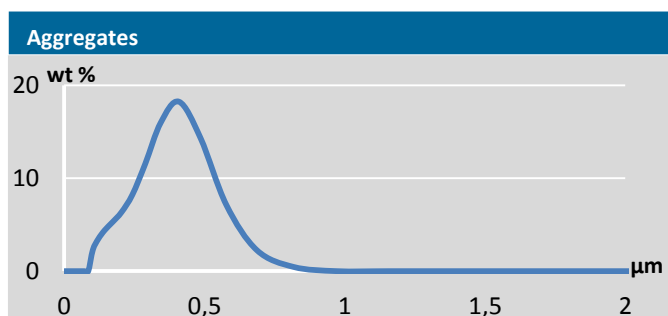
We offer two main types of alumina nanopowders: one with binding system (Al100-BA), one without (Al100). The powders are available in spray-dried granulates or slurries. Customized alumina nanopowders are available on demand, such as ultrapure alumina (99.99%), Ziconia Toughened Alumina or gamma alumina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

Key Benefits

- Higher toughness
- Better wear resistance
- Extremely high hardness
- Higher breakdown electrical field
- Increased thermal shock resistance

General Characteristic		Al100-BA	Al100
Binding System	-	Organic, PVA based	None
Average Particle Size	nm	150	150
Powder Free Density	g/cm^3	1,1	1,3
Minimum Purity	%	99,9%	99,9%
Gamma Phase	%	0%	0%
Specific surface area	m^2/g	7 ± 2	7 ± 2

Purity		Al100-BA, Al100
Al_2O_3	wt%	99,9
MgO	ppm	1000
CaO	ppm	< 200
K_2O	ppm	< 200
Fe_2O_3	ppm	< 50
Na_2O, SiO_2	ppm	< 40



Sintering		Al100-BA, Al100
Compaction force	MPa	> 200 MPa
Green density	%	55 %
Sintering temperature	°C	1500
Sintered density	g/cm^3	3,98
Intercept grain size	μm	> 1,2
Elasticity modulus	GPa	390
Hardness (Vickers)	GPa	21
Abrasion resistance	nm/h	5
Fracture toughness	$MPa \cdot m^{0,5}$	3,84

