BAIKALOX®

Characteristics

- Thanks to our use of three different Baikowski[®] process routes (Alum, Bayer Modified and Aluminium Hydrolysis), all our High Purity Alumina products are controlled in:
- Particle size & particle size distribution (PSD)
- Chemical purity (3N, 4N and beyond)
- Crystalline phase
- Specific surface area (wide range of SSA available)
- Morphology

> Example of particle size distributions



Baikalox® range

Process route		Alum route													
Baikalox [®] produ (Typical values	cts ;)	А		GE			CR				ВА		ВМА	SM	SMA
Product name		A125	GE30	GE6	GEA6	CR125	CR30F	CR6	CR1	BA20	BA15	BRA105	BMA15	SM8	SMA6
Chemical Purity		4N													
Crystalline phase (%) γ/α Specific Surface Area		100/0	20/80	0/1	100	100/0	20/80	0 0/100		3/97	0/100	90/10	0/100		
Specific Surface Area (m²/g) <i>BET</i>		106	25	6	6	105	26	6	3	21	15	95	15	10	7
PSD (μm)	d_50	2.0	4.5	8.0	8.0	1.0	0.2	0.5	1.0	4.5	4.5	1.0	0.1	0.2	0.2
Bulk density (g/cm ³)		0.2	0.3	0.4	0.3	0.1	0.3	0.6	0.6	0.3	0.3	0.2	0.8	0.8	0.9
Tapped density (g/cm ³)		0.3	0.6	0.7	0.4	0.2	0.5	0.8	1.0	0.5	0.5	0.3	1.1	1.1	1.3
Elemental Analysis (ppm) <i>ICP</i>	Na	10	12			12				13		12	10	13	
	Si	12	18			20				12		15	5	22	
	Fe	4	4			4			5		4	5	6		
	Ca	2	2			2				2		2	4	4	
К		20		18			20				18		15	11	

This is only an overview of the existing range.

Please contact our sales department for more information.



Process route		Bayer Modified route										Aluminium Hydrolysis route			
Baikalox [®] product (Typical values)	н	P	тср				LS	Р	В	SA					
Product name	HP DBM	HPT DBM	TCP DBM	TCP-LS DBM	TCPT DBM	TCPT-LS DBM	LSDBM	PB8 DBM	PB12 DBM	SA80	SA8 DBM	SA5 DBM			
Chemical Purity		3N										4N			
Crystalline phase		α									α				
Specific Surface Area (m ² /g) BET		8	4	7	9	4	4	3	8	12	80	8	5		
PSD (μm)	d ₅₀	0.4	0.8	0.4	0.4	0.8	0.8	1.2	0.3	0.3	20.6	0.3	0.8		
Green density (g/cm ³) (Uniaxial pressing at 350 bar)		2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.0	-	2.2	2.2		
Fired density (g/cm ³) (Sintered at 1510°C for 2h)		3.95	3.85	3.90	3.90	3.85	3.85	3.80*	3.95	3.92	-	3.94**	3.82		
Linear Shrinkage (%)		17.5	16.0	17.5	17.5	16.0	16.0	15.4	18.5	20.7	-	17.4	15.6		
Flemental	Na	30		600	30	600	90	175	43		5				
Analysis (ppm)	Si	30		15			25 340		10		15				
	Fe	40		80				90	80		3				
ICP	Са	25			4	5		380	50		3				

This is only an overview of the existing range. Please contact our sales department for more information. *Sintered at 1620°C for 1.5h ** With MgO addition (500ppm)

Applications

> Baikalox[®] is designed for:

- Thermal conductivity
- Dielectric properties
- Mechanical properties (as a filler in a matrix, or in a ready to use polishing solution thanks to alumina intrinsic hardness)
- Optical properties (visible & IR)
- **Sintering** properties (high reactivity at low temperature)





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