

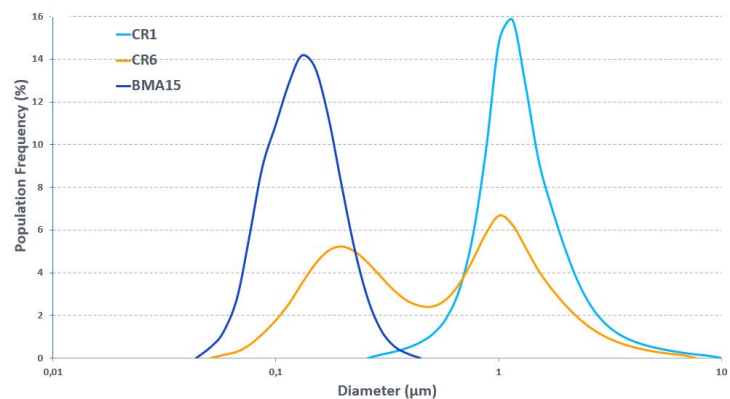
# BAIKALOX®

## 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® products (Typical values)		A		GE		CR				BA		BRA		BMA	SM	SMA
Product name		A125	GE30	GE6	GEA6	CR125	CR30F	CR6	CR1	BA20	BA15	BRA105	BRA15	BMA15	SM8	SMA6
Chemical Purity		4N														
Crystalline phase (%) $\gamma/\alpha$		100/0	20/80	0/100		100/0	20/80	0/100		3/97	0/100	90/10	0/100			
Specific Surface Area (m <sup>2</sup> /g) BET		106	25	6	6	105	26	6	3	21	15	95	15	15	10	7
PSD (µm)	d <sub>50</sub>	6.0	8.0	9.0	8.0	0.3	0.4	0.6	1.0	11	10	0.3	0.4	0.1	0.1	0.2
Bulk density (g/cm <sup>3</sup> )		0.2	0.3	0.4	0.3	0.1	0.3	0.6	0.6	0.3	0.3	0.2	0.4	0.8	0.8	0.9
Tapped density (g/cm <sup>3</sup> )		0.3	0.6	0.7	0.4	0.2	0.5	0.8	1.0	0.5	0.5	0.3	0.6	1.1	1.1	1.3
Elemental Analysis (ppm) ICP	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		
	K	20	18		20				18		20		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® products (Typical values)	HP		TCP				LS	PB			SA			
Product name	HP DBM	HPT DBM	TCP DBM	TCP-LS DBM	TCPT DBM	TCPT-LS DBM	LSDBM	PB4 DBM	PB8 DBM	PB12 DBM	SA80	SA8 DBM	SA5 DBM	
Chemical Purity	3N										4N			
Crystalline phase	α										Transition	α		
Specific Surface Area (m²/g) BET	8	4	7	9	4	4	3	4	8	12	80	8	5	
PSD (µm)	d <sub>50</sub>	0.4	0.8	0.4	0.4	0.8	0.8	1.2	0.8	0.3	0.3	20.6	0.3	0.8
Green density (g/cm³) <i>(Uniaxial pressing at 350 bar)</i>	2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.0	-	2.2	2.2	
Fired density (g/cm³) <i>(Sintered at 1510°C for 2h)</i>	3.95	3.85	3.90	3.90	3.85	3.85	3.80*	3.90	3.95	3.92	-	3.94**	3.82	
Linear Shrinkage (%)	17.5	16.0	17.5	17.5	16.0	16.0	15.4	16.5	18.5	20.7	-	17.4	15.6	
Elemental Analysis (ppm) ICP	Na	30		600	30	600	90	175	43			5		
	Si	30		15		25		340	10			15		
	Fe	40		80				90	80			3		
	Ca	25		45				380	50			3		

This is only an overview of the existing range.

Please contact our sales department for more information.

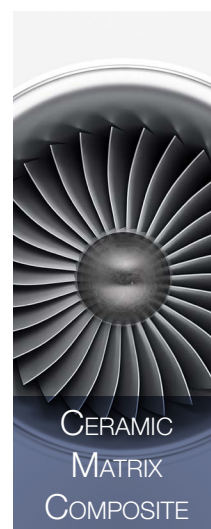
\*Sintered at 1620°C for 1.5h

\*\* 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)



Baikowski®

sales@baikowski.com

www.baikowski.com

**Baikowski® SA**  
France | Poisy | ☎+33 4 50 22 69 02

**Mathym® SAS**  
France | Lyon | ☎+33 4 78 83 72 93

**Sales Representative in China**  
China | Shanghai | ☎+86 21.6289.2883

**Baikowski® Korea Co, Ltd.**  
Korea | Seoul | ☎+82 255.281.97

**Baikowski® Malakoff Inc.**  
USA | Malakoff (TX) | ☎+1 903-489-1910

**Baikowski® International Corp.**  
USA | Charlotte (NC) | ☎+1 704-587-7100

**Baikowski® Japan Co, Ltd.**  
Japan | Chiba | ☎+81 474.73.8150