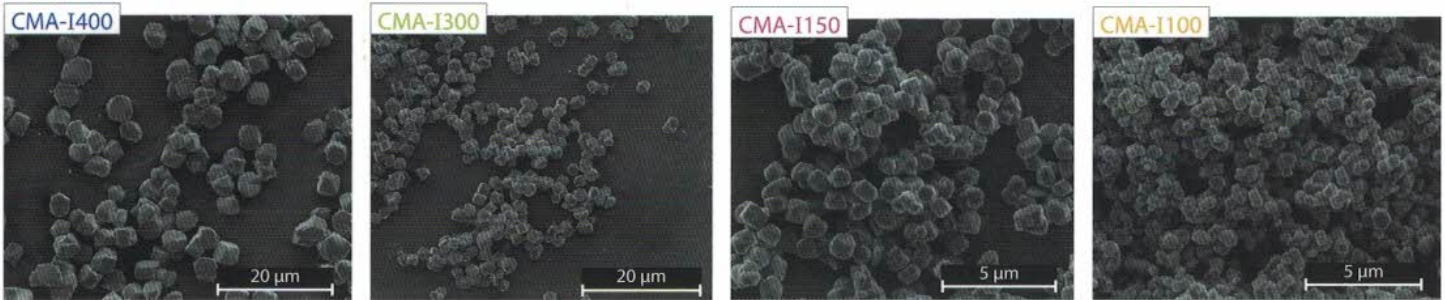



# CMA<sup>®</sup> CONTROLLED MORPHOLOGY ALUMINA

## ■ CMA<sup>®</sup> PRODUCTS RANGE

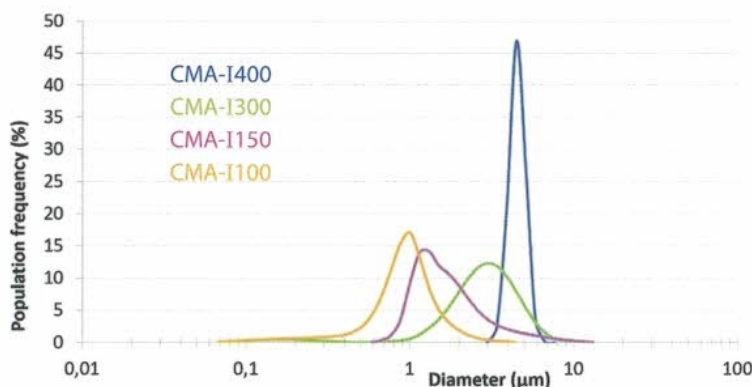


Standard CMA <sup>®</sup> products (Typical values)	CMA-I400	CMA-I300	CMA-I150	CMA-I100
Crystalline phase (%)	100% α			
Specific Surface Area (m <sup>2</sup> /g) <i>BET</i>	0.7	1.1	2	3.1
PSD (μm) <i>Laser diffraction Horiba LA950</i>	d <sub>10</sub>	3.6	1.4	1.0
	d <sub>50</sub>	4.2	2.7	1.4
	d <sub>100</sub>	6.7	4.6	3.1
Bulk Density (g/cm <sup>3</sup> )	1.0	0.9	0.6	0.6
Tapped Density (g/cm <sup>3</sup> )	1.9	1.6	1.2	1.0
Chemical Composition (ppm)	Na	10	10	10
	Si	350	250	150
	Fe	2.5	2.5	2.5
	Ca	40	41	44
	K	14	14	14

> CMA<sup>®</sup> Controlled Morphology Alumina characteristics include all the Baikalox<sup>®</sup> specifications, plus:

- Controlled in Shape and Morphology:  **Icosahedral form**
- Monomodal distribution tighter than Baikalox<sup>®</sup>
- Wide range of mean particle size from 0.5 to 5μm
- Higher crystallinity than Baikalox<sup>®</sup>

### PARTICLE SIZE DISTRIBUTION



### PRODUCTS DESIGN

Baikowski<sup>®</sup> can also design CMA<sup>®</sup> upon request under several shapes:

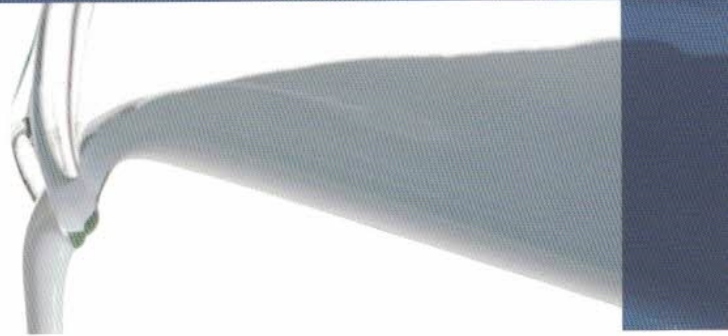
- Icosahedral
- Spherical
- Ellipsoidal



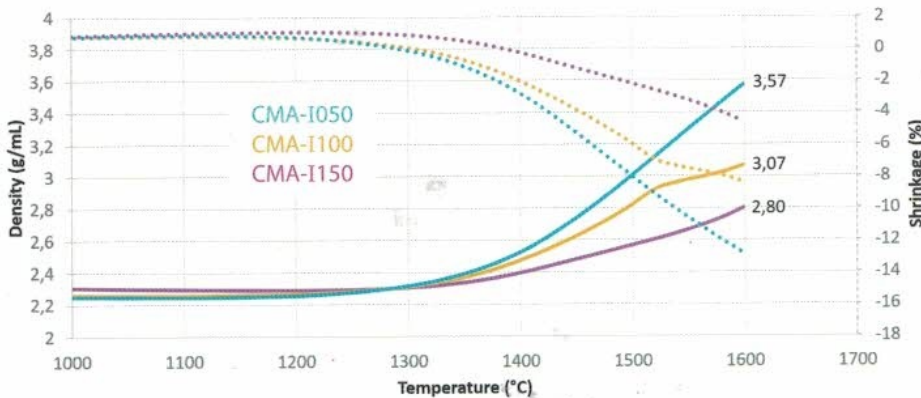
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I-20144 Milano – Via Egadi 12



Baikowski  
PSB INDUSTRIES



### DENSIFICATION & SHRINKAGE AS FUNCTION OF TEMPERATURE

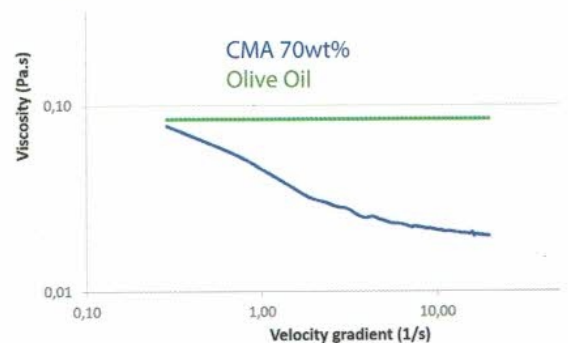


Thanks to the Icosahedral form and the monomodal & tighter PSD of the CMA®, **particles** can be **uniformly packed**. It allows a high control of the porosity of the sintered parts.

CMA® has a **low viscosity** which will allow:

- High content rate in dispersion
- To control the coatings thickness

### VISCOSITY OF CMA® SLURRY

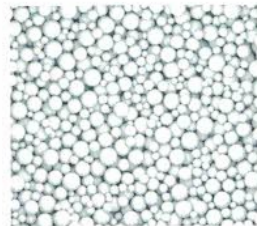


## ■ TAILOR YOUR CERAMICS POROSITY

➤ CMA® Controlled Morphology Alumina has a high sintering reactivity at low temperature thanks to its high tapped density, icosahedral form and its tighter PSD.

It enables to maximize the powder stacking by reducing intergranular spaces.

Thus you will **control the porosity** of your final ceramic parts.



➤ Furthermore, Baikowski® offers several particle sizes that are well defined in the CMA® products range. We customize your raw material in order to fine-tune the porosity of your ceramics.

## POTENTIAL APPLICATIONS

CMA® Controlled Morphology Alumina opens up the possibilities of applications:

- Thermal management
- Filtration
- Precision polishing
- 3D printing
- Battery



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