



Hindalco Alumina

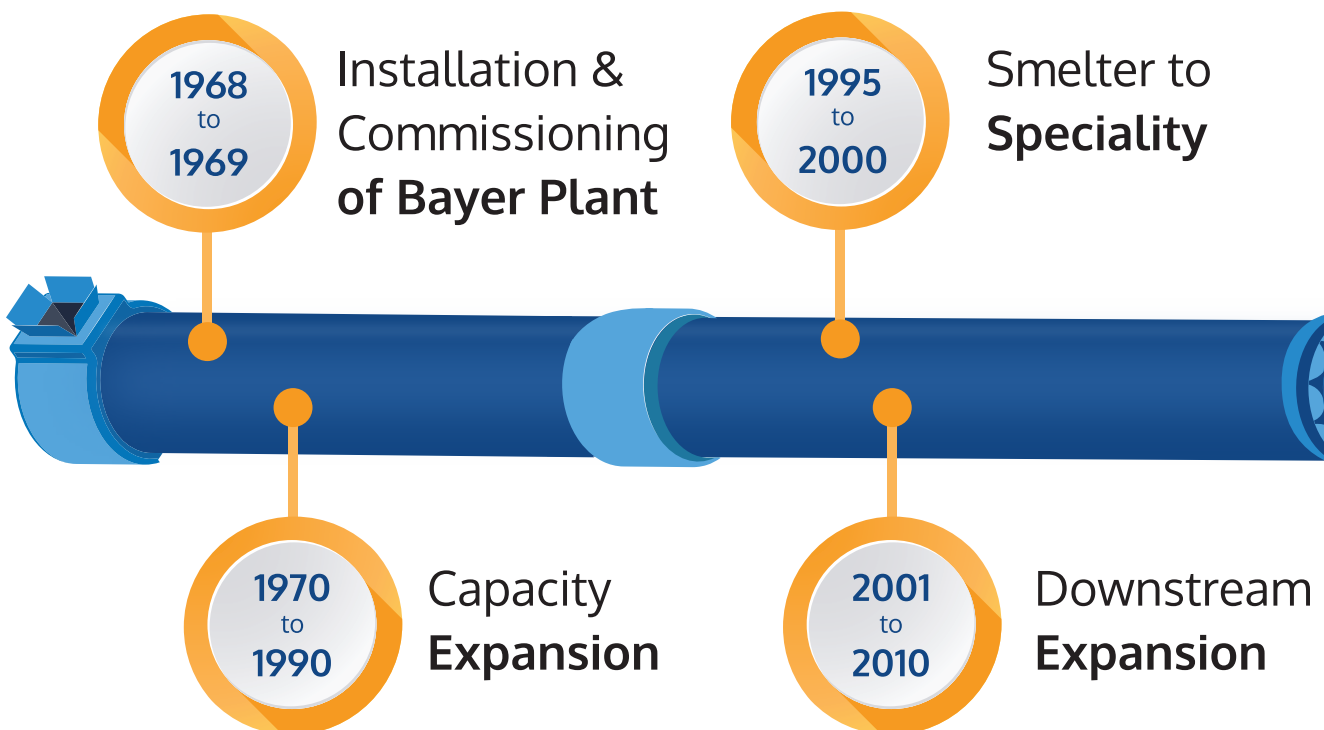
For Advanced Ceramics



The Specialty Alumina Business of Hindalco Industries Limited, the Metals flagship company of the USD 65 billion Aditya Birla Group, has been serving the Alumina and Hydrate needs for Advanced Ceramics, Refractories, Water Treatment Chemicals, Flame Retardants, Polishing, and many diverse industries for over five decades.

Headquartered in India, the Aditya Birla Group has a diversified business portfolio and presence across 14 industry sectors. Hindalco Industries Limited is the metals flagship company of the group and the industry leader in Aluminium, Copper and Specialty Alumina manufacturing. It is a fully integrated manufacturer with a global presence, operating **47 manufacturing sites across Europe, America and Asia.**

Our R&D facility, Hindalco Innovation Centre for Alumina (HIC-A), is recognized by the Government of India and accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL). HIC-A has developed a multitude of technologies and products to address a wide range of customer requirements.



With a keen awareness of market dynamics, we have strategically evolved our supply chain to align with customer demands. New warehouses have been strategically added in key markets across North America, Europe, and Asia. Recognizing the pivotal role that **Japan, Europe, and the US** will play in our forthcoming growth phase. We have established **regional hubs and sales offices** in these areas to strengthen our customer connections.

Pioneering sustainability in the Alumina Industry, Hindalco has been successful in repurposing all the bauxite residue generated from our Alumina manufacturing operations. Hindalco is the world's first company to achieve 100 percent Red Mud utilization across three of its refineries. Consequently, we have been rated as **"The World's Most Sustainable Aluminium Company"** consecutively for the last 3 years by the Dow Jones Sustainability Indices.

We believe our commitment to a strong partnership focused on excellence, innovation, and sustainability brings forward novel solutions reimagining the world of Alumina to **make the world Greener, Stronger and Smarter**.



Further Value Addition



Introduction of HCA, SMA and IC series

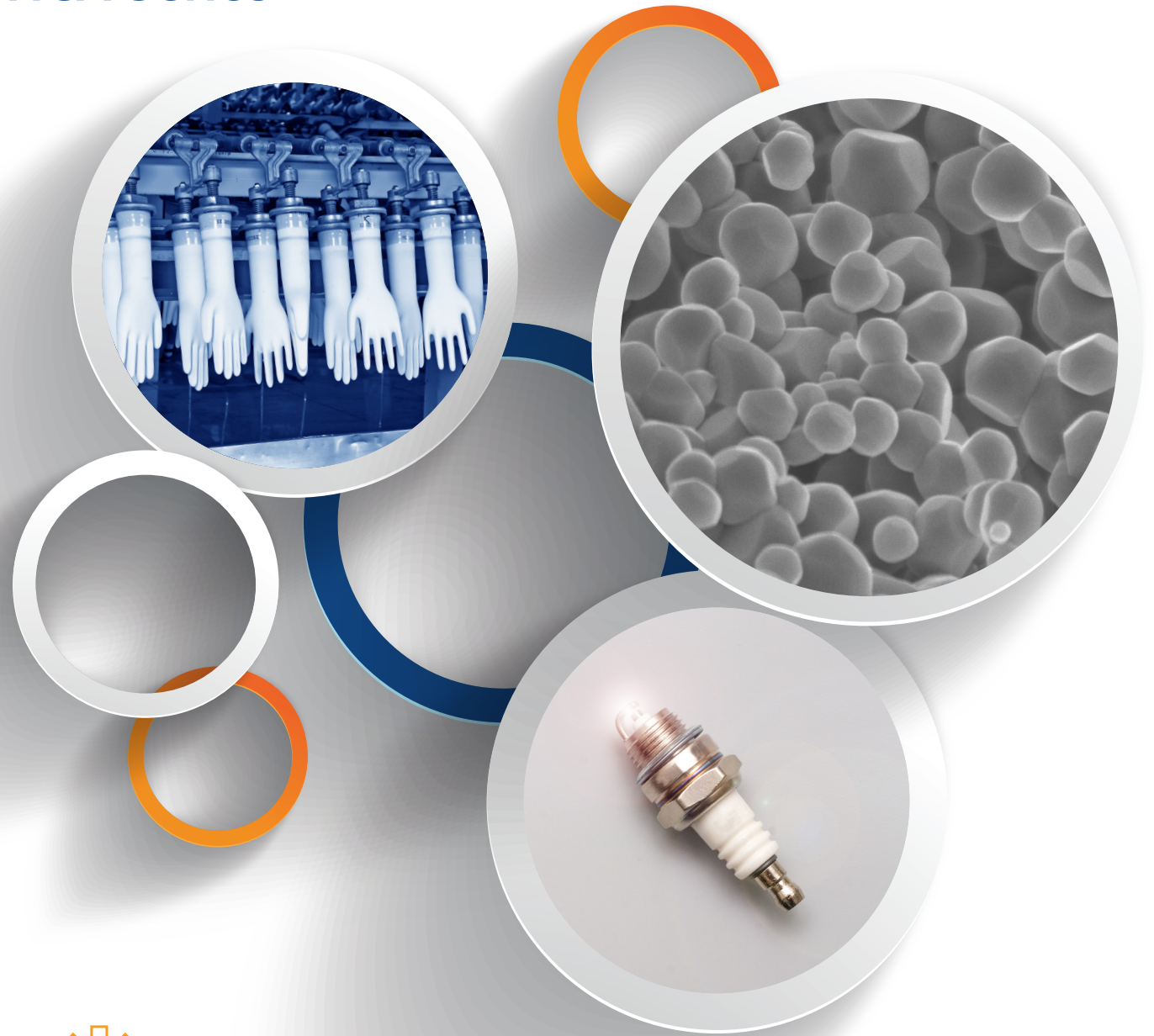


Commencement of Japan office



Offices and Warehouses in Europe and US

HCA Series



Key Properties

- High Degree of Crystallinity
- Defined Crystal Morphologies
- Excellent Structural Stability
- Superior Dielectric Strength
- High Thermal Conductivity

High Crystalline Alumina (HCA) series are our new offering for advanced ceramic applications. They are produced with high degree of crystallinity at high temperatures to obtain close to theoretical properties (mechanical, electric) of aluminas. These aluminas are supplied for spark plug, vacuum circuit breakers, glove formers and high voltage applications. They are also offered at different degree of milling characteristics for advanced ceramic applications. With Hindalco's proprietary technology, the coarse powders are milled to perfection and catered to various industries.

Unground

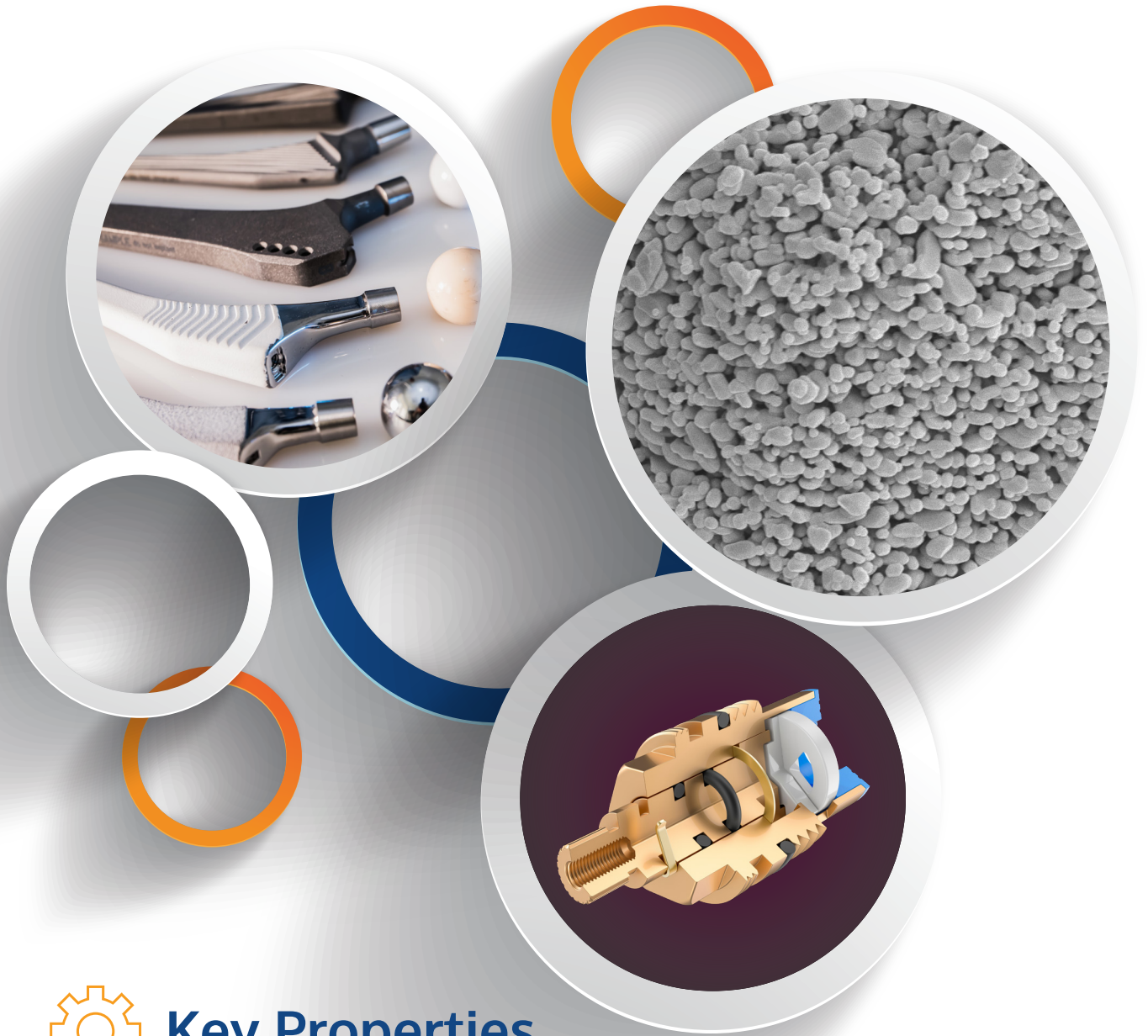
Properties	HCA1	HCA2	HCA3	HCA4
Na ₂ O, %	0.10	0.10	0.10	0.10
Fe ₂ O ₃ , %	0.02	0.02	0.02	0.02
SiO ₂ , %	0.02	0.02	0.02	0.02
SSA, m ² /g	1.0	0.8	0.7	0.6
UCS, μm	1.5	2.0	2.5	3.0

Fine Ground

Properties	HCA1FG	HCA2FG	HCA3FG	HCA4FG
Na ₂ O, %	0.10	0.10	0.10	0.10
Fe ₂ O ₃ , %	0.02	0.02	0.02	0.02
SiO ₂ , %	0.02	0.02	0.02	0.02
SSA, m ² /g	1.5	1.0	0.8	0.7
d50, μm	3.5	4.0	4.5	5.0



IC Series



Key Properties

- Homogenous Particle Characteristics
- Better Packing Fraction
- Suitable for Dry and Wet Processing
- High Density Ceramics
- Tailored Microstructure
- Excellent Wear Resistance

Hindalco's high purity alumina for Industrial Ceramics (IC) is a superior product for high density advanced ceramics for various applications. The physical and chemical properties are customized to obtain superior ceramic properties suitable for engineered applications such as ceramic armours, catalyst carriers and liners for fluid transfers

Unground

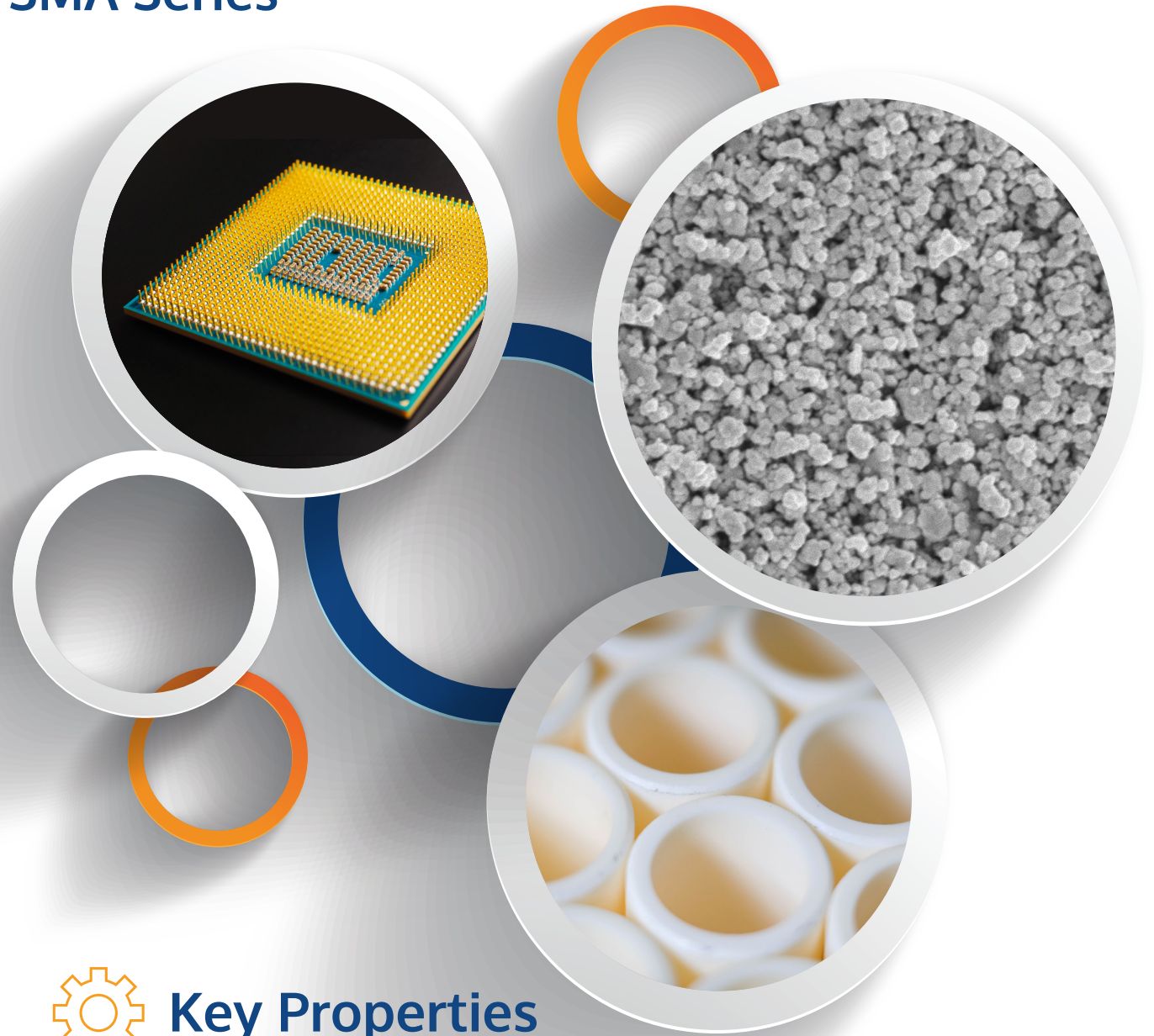
Attributes	IC03	IC06	IC10
Na ₂ O, %	0.03	0.06	0.10
Fe ₂ O ₃ , %	0.02	0.02	0.02
SiO ₂ , %	0.08	0.08	0.08
SSA, m ² /g	1.2-1.5	1.0-1.5	1.2-1.8

Super Ground

Attributes	IC03SG	IC06SG	IC10SG
Na ₂ O, %	0.03	0.06	0.10
Fe ₂ O ₃ , %	0.02	0.02	0.02
SiO ₂ , %	0.08	0.08	0.08
SSA, m ² /g	2.0 - 3.0	2.0 - 2.5	2.0 - 3.0
d50, μm	1.5 - 2.0	1.5 - 2.0	1.5 - 2.0



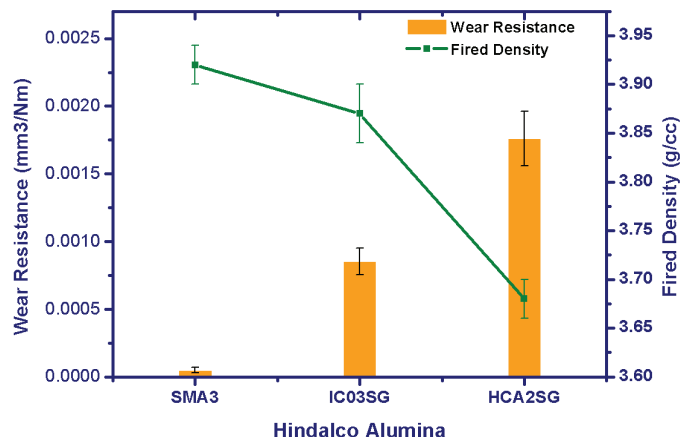
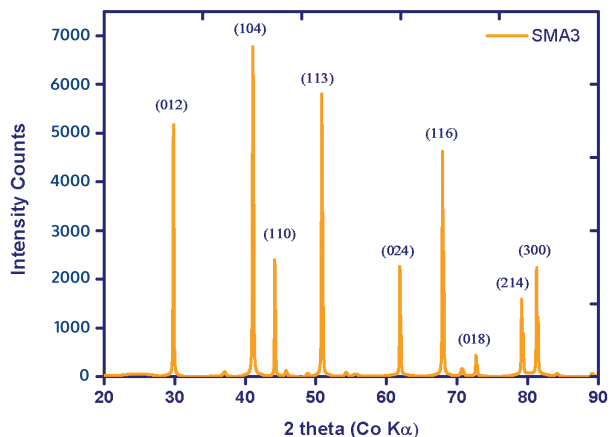
SMA Series



Key Properties

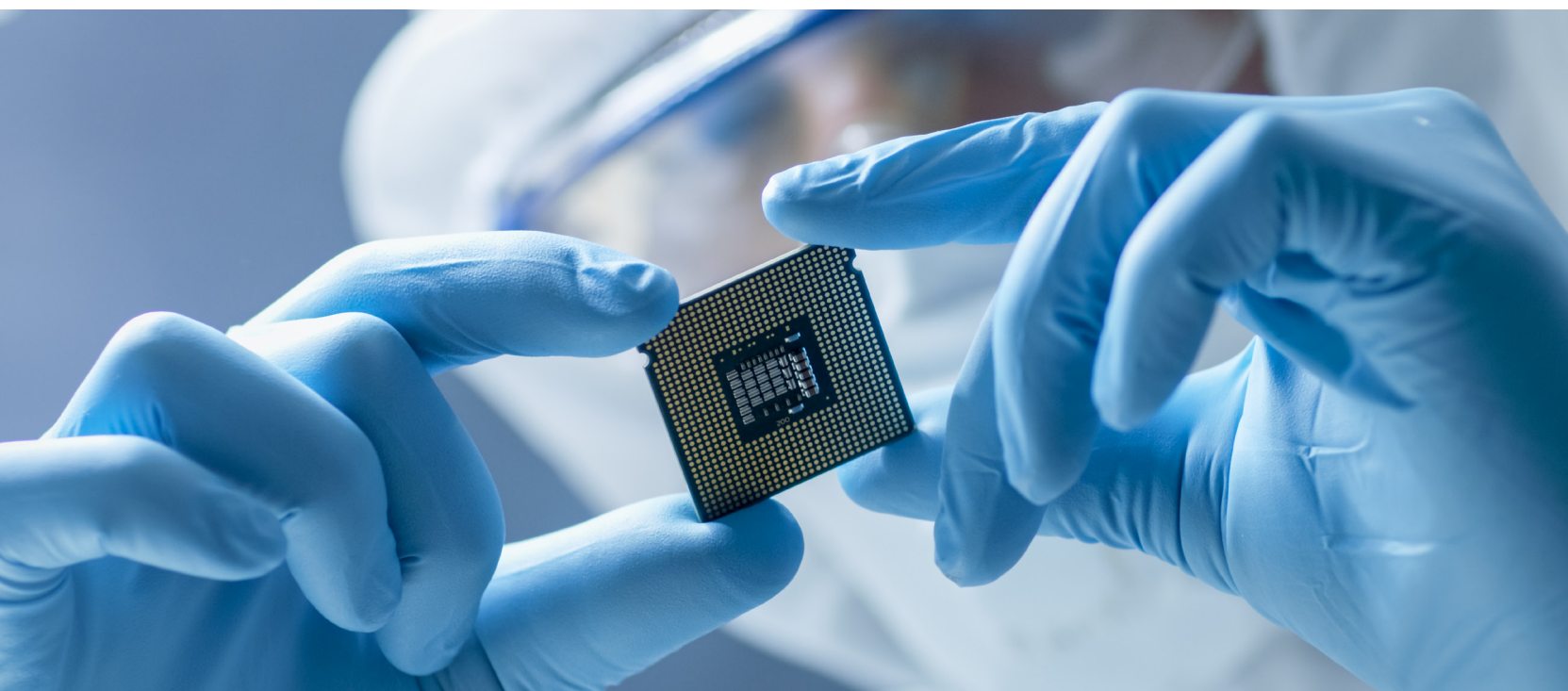
- Sinter Reactive Alumina
- Narrow Particle Distribution
- Suitable for Additive Manufacturing
- High Inertness
- Resist Metallic Dendrite Formation
- Phase Stability to Avoid Thermal Runaway

Sub-micron alumina (SMA) is a new family of low soda reactive alumina product with a narrow particle size distribution. It is suitable for both wet and dry processing of ceramics to achieve a fired density of 3.94 g/cc. Due to its fine sintered microstructure, it can be used for high wear resistance and flexural strength



Attributes	SMA1*	SMA2*	SMA3	SMA4	SMA5
Na ₂ O, %	0.01	0.02	0.05	0.08	0.10
Fe ₂ O ₃ , %	0.02	0.02	0.02	0.02	0.02
SiO ₂ , %	0.03	0.03	0.08	0.08	0.08
SSA, m ² /g	8	8	8	8	8
d10, μm	0.2	0.2	0.2	0.2	0.2
d50, μm	0.5	0.5	0.5	0.5	0.6
d90, μm	2.0	2.5	2.5	3.0	6.0

* Future offerings



Customer Service with...



Customized Products



Customized Packing



On Time in Full (OTIF) Delivery



Wide Distribution Network



Application Support

Creating a circular economy to build a **#GreenerStrongerSmarter** and a sustainable future!



Our Global Reach



- Headquarter
- Hindalco Japan K.K.
- Manufacturing Plant
- R&D Center
- Warehouse
- Channel Partner
- Technical Collaboration

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