



ALTEO ALUMINAS FOR GLASS

more than just a source of Al_2O_3



Alumina – aluminium oxide, Al_2O_3 – is an important component in glass, with contents varying from 1% up to 25% in applications such as glass ceramics.

As a network stabiliser in glass structures, alumina has a positive impact on both the glassmaking process and the properties of the glass itself.

In particular, **alumina improves:**

- **Resistance to chemical attack**
- **Mechanical strength**
- **Resistance to thermal shock**

Specialty aluminas derived from the Bayer process bring significant advantages in glass, when compared with natural minerals:

- **Consistency of chemical composition**, in particular levels of Na_2O and Fe_2O_3
- **Low to very low impurity levels** (Fe_2O_3 , Na_2O , Sulphur, Chlorine)
- **Uniform and consistent particle size and structure**
- **Stability of supply**



These properties are particularly valuable when looking for high quality glasses and when quality natural raw materials are scarce, expensive or no longer suitable for new glass compositions.

Alteo specialty alumina grades, including both aluminium trihydroxides (ATH) and aluminium oxides, can be used in a wide variety of glass applications.

	ATH	Alumina	
	SH950	AR75	AC90
<i>*Available upon request</i>			
Applications			
Glass fiber	●		●
Glass ceramics for cooktop panel and fire resistant door		●	●
Kitchen cookware	●	●	●
Ultra clear bottle and tableware	●	●	●
Pharmaceutical glass	●	●	●
Solar panels	●	●	●
Cover glass		●	
LCD substrate glass			

FOCUS ON SPECIALTY GLASS



The **low alkali content** (sodium, potassium and lithium) of Alteo alumina is essential for applications such as **tubes for halogen lamps**.

Grades with **strictly-controlled particle size distribution**, such as **AR5** and the **low-soda P Series** are the **ideal aluminas for flat panel display**, in particular **LCD** (liquid crystal displays), **cover glass** and **touchpanel screens**.

		ATH	Alumina	
		SH950	AR75	AC90
Physical Properties	Unit			
Particle Size Distribution (Clas) D50	µm	95	80	80
Loose Bulk Density	g/cm ³	1.30	1.00	0.82
Angle of Repose	°	33	34	50
Specific Surface Area BET	m ² /g	N/A	70	0.5
Loss on ignition (20-1000°C)	%	34.6	1.5	0.1
Chemical Properties				
AL ₂ O ₃ - by difference	%	65	98.4	99.6
Na ₂ O total	ppm	2000	3600	3600
CaO	ppm	100	200	200
SiO ₂	ppm	90	100	100
Fe ₂ O ₃	ppm	100	150	150

Typical data

ALTEO R&D

For Alteo, innovation and application R&D are major parts of its growth strategy.

Alteo enhances its R&D capabilities through its **application laboratory**: the installation of **state-of-the-art equipment**, the recruitment of technical experts and collaborations with key partners and **university laboratories**.

With the help of key partners such as **CelSian**, **Glass Trend** and **university laboratories**, Alteo is constantly looking for the **best specialty alumina-based solution to your glass technology ambitions**.

Contact our R&D team now at www.alteo-alumina.com/contact



CUSTOMER CARE COMMITMENT

To meet your highest expectations, our Customer Care team will always strive to ensure a **first class** service.

Our commitment is to provide **full support** from your first call to the delivery of our products; with technical assistance, packing solutions and short lead times.



ALTEO AT A GLANCE

- A leading integrated supplier of specialty products with the largest production capacity worldwide for calcined, pure and fine alumina.
- A global sales network with 4 regional hubs, 14 offices and more than 35 local warehouses around the world.
- Two development centers in France and China.
- A leading raw material supplier to the following industrial markets: Advanced Ceramics, Performance Refractories, Thermal Management EV-Batteries, Flame retardant, Specialty Glass, Polishing.

Design : Emeline MARTEL - Communication



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