

HALOGEN-FREE

FLAME RETARDANT FILLERS

2026



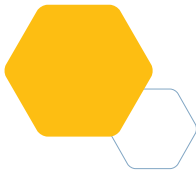
GENERAL PROPERTIES

Aluminium trihydroxide (ATH) is a halogen-free flame retardant filler. When heated above temperatures of approximately 200°C, an endothermic reaction will take place, liberating 3 molecules of water and thereby removing energy from the combustion zone.

The loss of 34.6 % of its weight as water vapour also dilutes combustible gases.

Furthermore, no toxic smoke or decomposition products are formed during this reaction, making ATH an ideal product to comply with regulations.

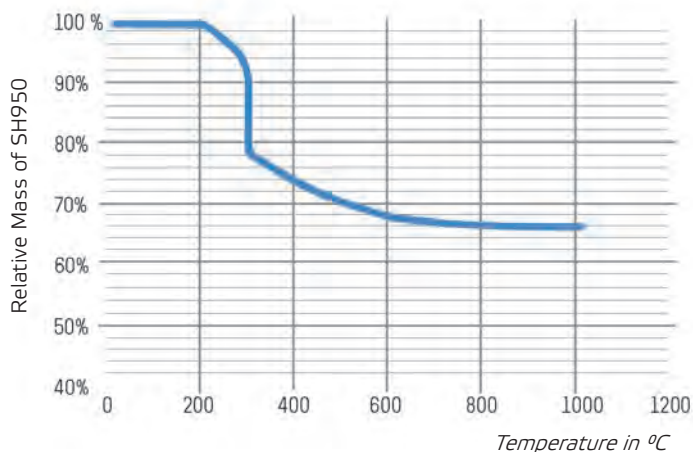
Alteo ATH grades have well defined particle size, top cut and oil absorption values. These and other relevant characteristics enable you to choose the grade best suited to your application, processing conditions and required filler loads.



Name	Aluminium trihydroxide
Chemical Formula	Al(OH) ₃
C.A.S.	21645-51-2
Loss on Ignition	34.6 %
True Density	2.4g/cm ³
Hardness - Mohs scale	3
Refractive index	1.58



Thermogravimetric analysis (TGA) of SH950 grade



FLAME RETARDANT ATH fillers range



Alteo plant produces a wide range of hydrates and calcined alumina thereby securing the availability of controlled feedstock for all possible applications.

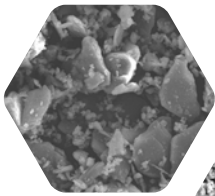
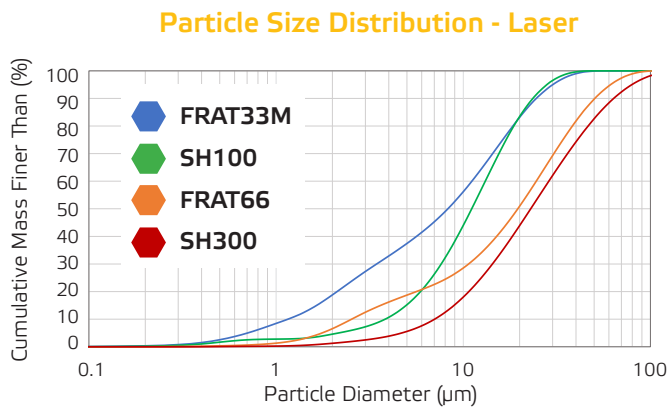
As the most widely used mineral in flame retardancy applications, Alteo offers a full range of unground, ground and blends of aluminium trihydroxide fillers that allow high filler content in multiple resins.

Typical applications and grades used

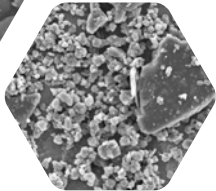
Polymer System	Application	Unground	Ground					Blends Optimized Packing Density		Precipitated
		SH950	SH300	SH150	SH100	SH80	SH30	FRAT66	FRAT33M	XFH-15
Polyester	SMC		●	●	●	●		●	●	●
	BMC		●	●	●					●
	Gel coat				●	●	●		●	●
	Pultrusion						●		●	●
	Synthetic marble	●	●	●	●					●
PVC	PVC rigid			●	●		●			●
	PVC - Plasticsols			●	●	●	●			●
	Flooring		●	●	●	●				●
Epoxy	Electronic parts - Casting resins		●	●	●	●		●	●	●
	Laminates		●	●	●	●		●	●	●
Polyurethane	Foam		●	●	●	●			●	●
	Rigid		●	●	●	●	●			●
	Casting resins		●	●	●	●	●	●	●	●
Acrylic	Pultrusion				●	●	●			●
	Injection moulding		●	●	●	●	●			●
	Artificial marble	●	●	●	●					●
Rubber and latex	Belt conveyors				●		●			●
	Elastomers			●	●					●
	Carpet			●	●					●
Others	Paint				●	●	●			●
	External Thermal Insulation (ETICS)	●	●	●						
	Adhesives - sealants			●	●	●	●			●

HIGHER FILLER CONTENT

Alteo has developed 2 specific ATH enabling our customers to increase loading levels that are necessary to meet evermore demanding stringent regulations.



FRAT33M



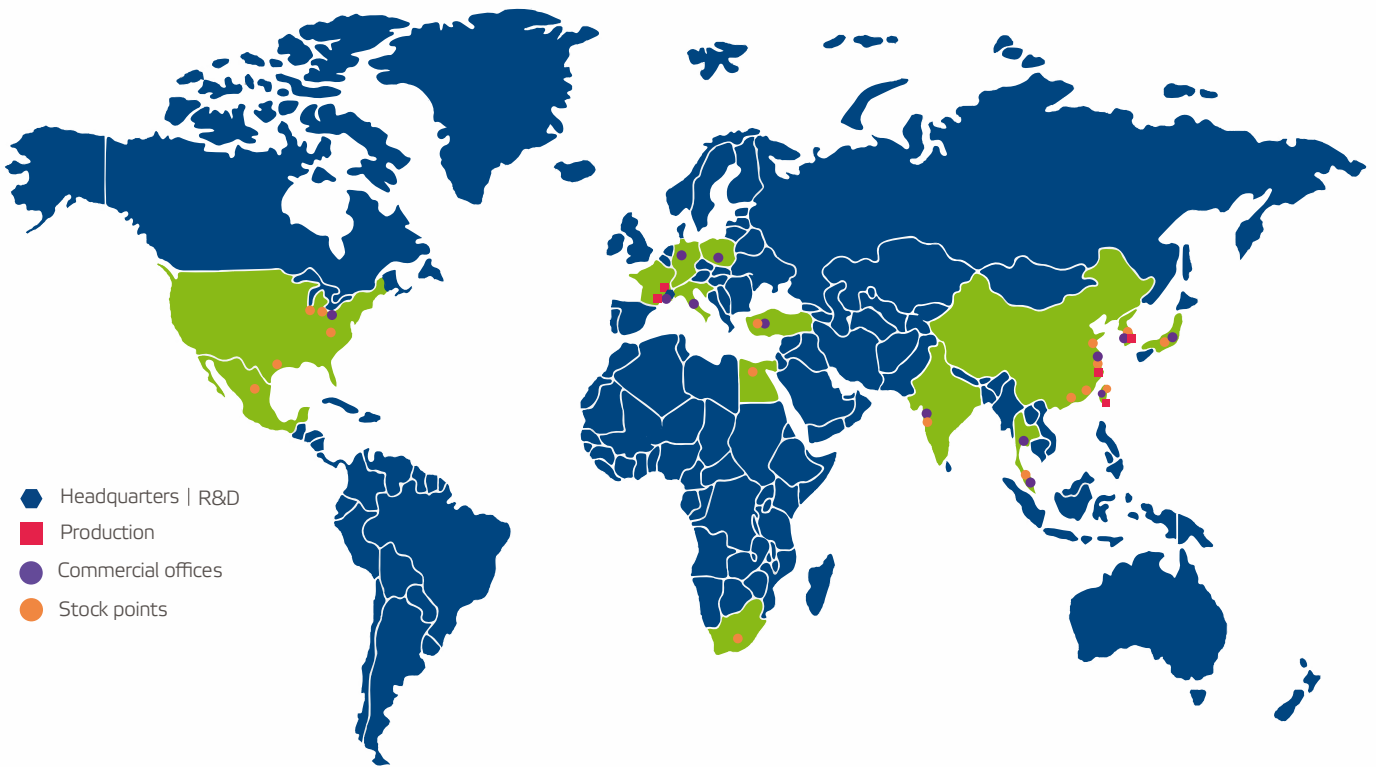
FRAT66

Optimized Packing Density

Physical properties	Unit	Optimized Packing Density	
		FRAT66	FRAT33M
Particle Size Distribution (Laser)			
D10	µm	2	2
D50	%	20	10
D90	%	60	22
Oil Absorption (oleic acid)			
Oil Absorption (oleic acid)	ml/100g	15	28
Specific Surface Area (BET)			
Specific Surface Area (BET)	m ² /g	2.0	3.7
Moisture Content			
Moisture Content	%	0.10	0.20
Loss On Ignition (100-1000°C)			
Loss On Ignition (100-1000°C)	%	34.6	34.6
Chemical analysis			
Al(OH) ₃ - by difference	%	99.7	99.7
Na ₂ O total	ppm	1950	1950
CaO	ppm	70	70
SiO ₂	ppm	65	65
Fe ₂ O ₃	ppm	75	75

Typical data

ALTEO WORLDWIDE



SUSTAINABILITY

ALTEO strives to transform industries with solutions that create real sustainability benefits for customers and society. By managing our operations responsibly and minimizing environmental impact, we place sustainability at the heart of how we innovate, operate, and collaborate—fueling sustainable growth and long-term value creation.

Regarding greenhouse gas emissions (CO₂), we have achieved a 63% reduction in our emissions since 2015, in line with the French National Low-Carbon Strategy. Concerning water withdrawals, we have reduced our consumption by 50% compared with 2019, following the launch of our Water Sobriety Plan and the commissioning of our wastewater treatment plant.

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, 13 offices and more than 35 local warehouses around the world.
- A leading raw material supplier to the following industrial markets: Advanced Ceramics, Thermal Management EV-Batteries, Flame retardant, Polishing, Performance Refractories, Glass.



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