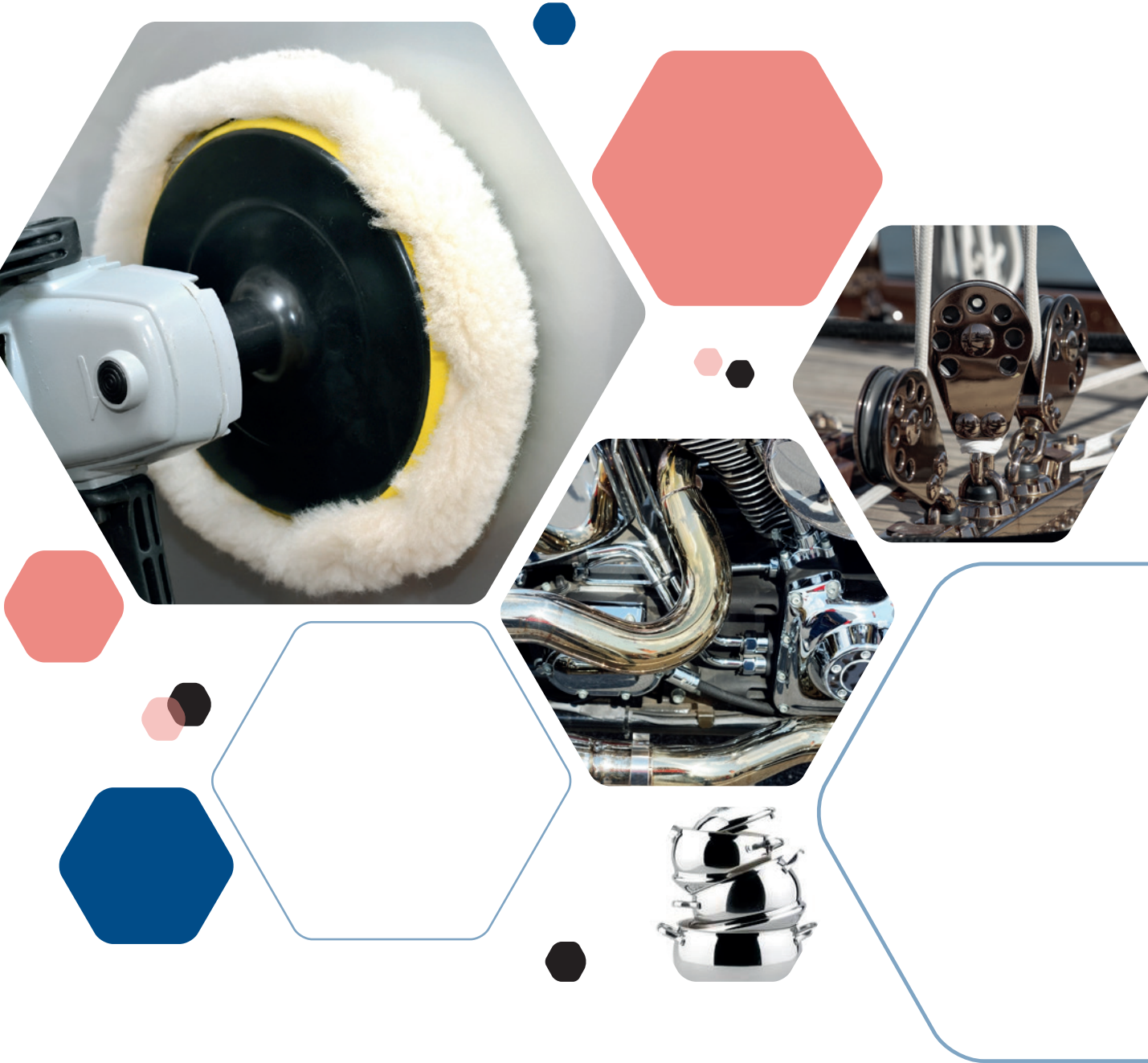




2024

SPECIALTY ALUMINAS FOR
POLISHING APPLICATIONS

TECHNICAL FEATURES



POLISHING

Polishing is a multi-stage process that aims to improve the surface condition of any object. These stages are:

- Pre-polish
- Polish
- Finishing

During each polishing step two sequential actions take place:

- Stock removal
- Buffing or Lapping

During stock removal, alumina agglomerates break down into primary crystals that continue the “smoothing” or buffing action.

The polishing behavior of an alumina is measured and expressed by two key characteristics:

- Cut (the ability to remove stock)
- Polish (the ability for buffing/lapping)

The calcination degree determines the primary crystal size and therefore the stock removal capability of an alumina. Large primary crystals will give more abrasion. A coarse alumina grade will generate higher stock removal compared to a finer grade, but agglomerate toughness is dominant.

ALTEO has developed a range of tailor-made polishing grade aluminas, taking advantage of its specialty alumina feedstocks and access to the required processing technologies.

POLISHING ALUMINAS - Product range

Our polishing aluminas can be applied in all of the usual ways:

- In solid compounds
- In liquid compounds
- As dry powder
- In suspension – slurry

All of our grades meet key customer requirements:

- Well defined topcut
- Stable PSD
- Consistent product quality
- Contamination free

SEGMENT	PRODUCT		
	Soft	Medium	Hard
Steel, Stainless Steel	●	●	●
Chrome	●		●
Brass	●	●	●
Non-ferrous Metals	●	●	●
Precious Metals	●		
Aluminium	●	●	●
Stones	●		
Plastics	●		
Wood	●		
Glass	●		
Electronics	●		
Varnishes	●		
Cleaners Automotive Rubbing compounds	●		

SOFT AGGLOMERATES



Type:

Low calcined grades - screened and ground (table 1) and superground (table 2).

Properties:

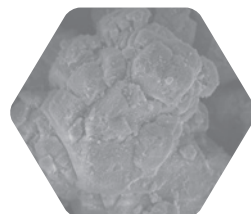
Low cut and high polish effect.

Technical interest:

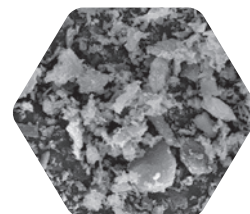
Used to give a high gloss.

Applications:

Steel & stainless steel, chrome, brass, non-ferrous metals, precious metals, stones, plastics, wood, glass, electronics, varnishes, cleaners, automotive rubbing compounds.



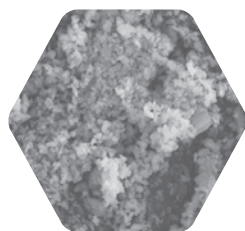
AR12TA



AR12B5

		AR12TA	AR12B25	AR12B15	AR12B10	AR12B5	AR12BFM
	Unit						
Particule Size D50 (Cilas)	µm	80	22	15	10	4.8	3.5
Particule Size D90 (Cilas)	µm	140	55	38	26	14	10
Screen residue	%	0.01 (<315µm)	2 (>90µm)	0.2 (90µm)	<0.1 (>75µm)	<0.1 (>45µm)	<0.2 (>20µm)
Oil absorption	ml/100g	48	44	40	40	39	38
Specific Surface Area BET	m ² /g	12	11	12	12	12.5	13
Alpha Alumina content	%	75	75	75	75	75	75
Primary crystal	µm	0.6	0.6	0.6	0.6	0.6	0.6
Total Na ₂ O	%	0.31	0.31	0.31	0.31	0.31	0.31
Cut	-	3	2.5	2	2	1	1
Polish	-	8	8	9	8.5	9	9

Typical data



A4G70

		A4G10	A4G70	A4G60
	Unit			
Particule Size D50 (Sedigraph)	µm	0.45	0.4	0.6
Particule Size D90 (Sedigraph)	µm	1.25	0.9	1.2
Screen residue	%	0.1 (>45µm)	0.1 (>45µm)	0.1 (>45µm)
Oil absorption	ml/100g	16	17	17
Specific Surface Area BET	m ² /g	6	8	5.5
Alpha Alumina content	%	85	85	90
Primary crystal	µm	0.45	0.45	0.55
Total Na ₂	%	0.04	0.04	0.04
Cut	-	1	1	2.5
Polish	-	8	9.5	9.5

Typical data

MEDIUM AGGLOMERATES

Type:

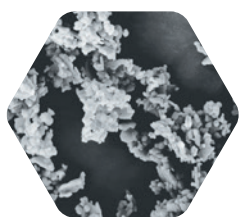
Calcined aluminas with a high alpha content - screened and ground.

Technical interest:

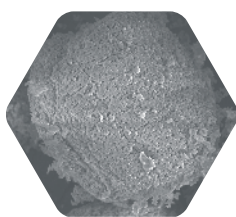
These grades are used for polishing and finishing when both treatments are required.

Applications:

Steel & stainless steel, chrome, aluminium



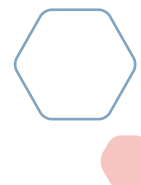
AC12B5



AC12TA

		AC12TA	AC12B5
Unit			
Particule Size D50 (Cilas)	µm	75	5.5
Particule Size D90 (Cilas)	µm	135	17
Screen residue	%	0.01 (>315µm)	0.5 (>63µm)
Oil absorption	ml/100g	43	25
Specific Surface Area BET	m ² /g	1.2	1.3
Alpha Alumina content	%	>99	>99
Primary crystal	µm	1.5	1.5
Total Na ₂ O	%	0.04	0.04
Cut	-	4	2.5
Polish	-	7	7

Typical data



HARD AGGLOMERATES

Type:

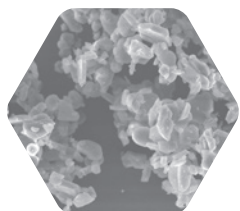
Calcined aluminas with a high alpha content - screened and ground.

Technical interest:

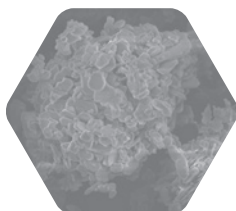
Mainly used for pre-polishing. These grades are used for polishing when both treatments are required.

Applications:

Steel & stainless steel, chrome.



AC34B5



AC35TA

		AC34B3	AC34B4	AC34B5	AC35TA
Unit					
Particule Size D50 (Cilas)	µm	3	4	5	80
Particule Size D90 (Cilas)	µm	7	10	13	140
Screen residue	%	<0.1 (>45µm)	<0.1 (>45µm)	1 (>45µm)	0.01 (>315µm)
Oil absorption	ml/100g	15	18	18	48
Specific Surface Area BET	m ² /g	1.5	1	0.8	0.5
Alpha Alumina content	%	>97	>97	>97	>97
Primary crystal	µm	2.8	2.8	2.8	2.8
Total Na ₂ O	%	0.31	0.31	0.31	0.31
Cut	-	4	4	4	8
Polish	-	7	6	5	3

Typical data

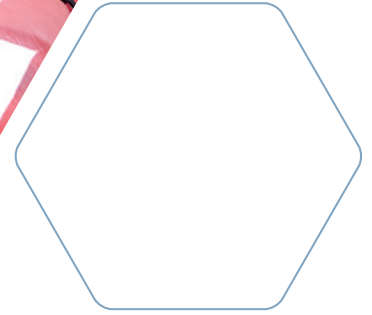
ALTEO R&D

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

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

Alteo constantly strives for the **best specialty alumina-based solution to your polishing ambitions**.

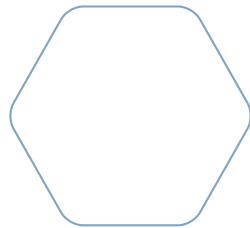
Contact our R&D team now at
www.alteo-alumina.com/contact



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, 16 offices and more than 35 local warehouses around the world.
- Production sites in France, Taiwan, South Korea 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



www.alteo-alumina.com