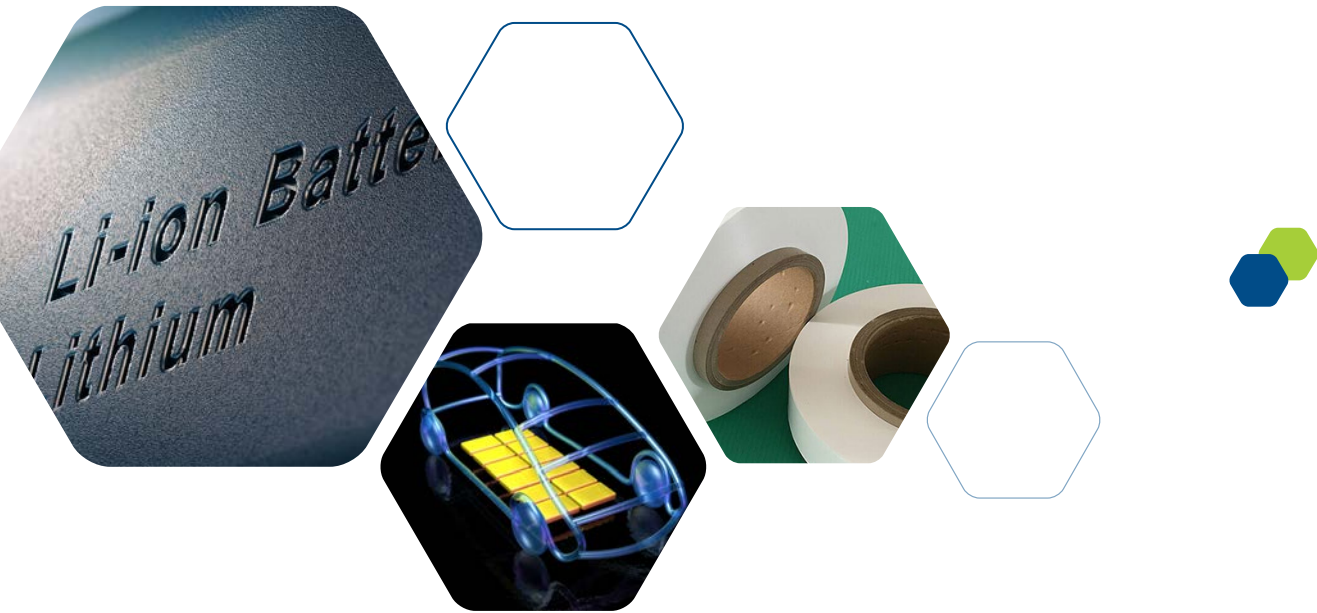




SPECIALTY ALUMINA FOR
BATTERY SEPARATOR COATING
 ELECTRICAL VEHICLES - ENERGY STORAGE SYSTEMS - CONSUMER ELECTRONICS



SPECIALTY ALUMINA FOR LITHIUM-ION BATTERY SEPARATORS



The SEPAl alumina range has been developed as a ceramic coating to improve the safety and performance of Li-ion and Na-ion batteries used in EV, ESS, consumer electronics and tools.

Available in slurry and dry powder with d50: 0,3*; 0,4 and 0,8 μ (* slurry only)

Key benefits

1. Safety

- **Better thermal stability than boehmite coating**
- Highest level of cleanliness
- Low moisture absorption
- Electrical insulation
- High resistance to dendrite penetration
- Improved separator tensile strength

2. Performance

- Easy to process and disperse, reduces production cost
- Ultra-thin coating leading to high ionic conductivity
- Enhanced electrolyte wettability

3. Versatility

- **Compatible with Lithium ion and Sodium ion batteries**
- Compatible with all cathode and anode chemistries : LFP, LMPF, NMC, NCA...
- Compatible with PVDF adhesive layer and all binder

Key characteristics

- Uniform PSD and strictly controlled topcut
- Very fine crystal size down to 0,3 μ
- High chemical purity
- Processed to separate foreign metallic particles
- Production capacity





SEPal-S3 :

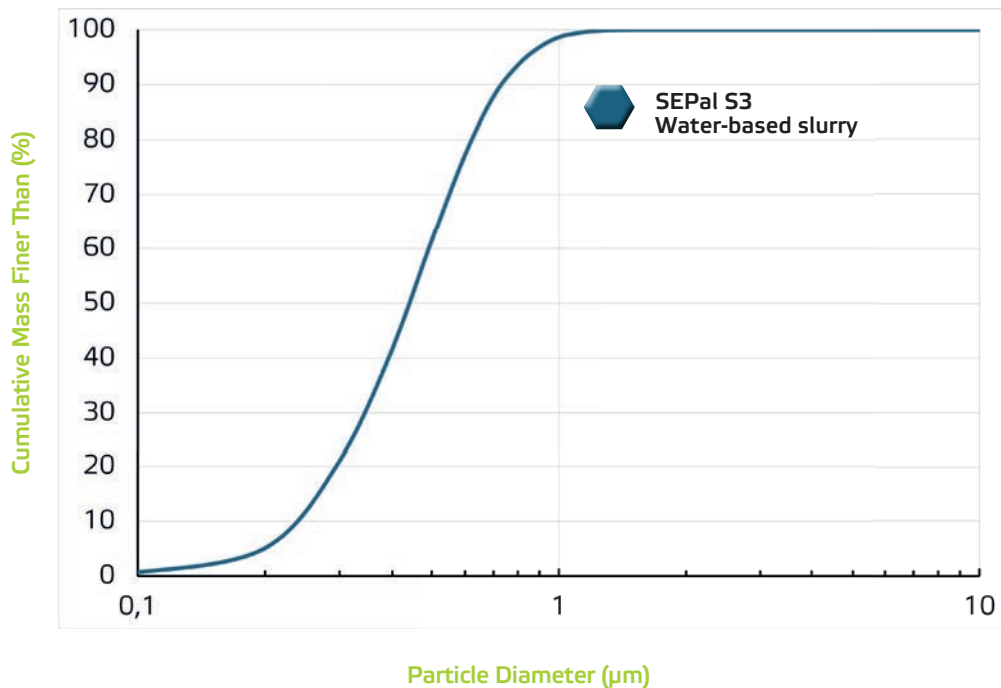
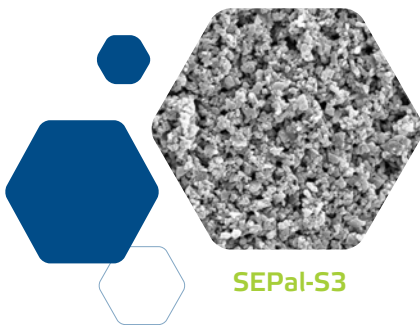
The finest grade available is specifically engineered to achieve **ultra-thin coatings**, typically at or below 1 μm .

Thanks to its extremely small and tightly controlled particle size distribution, this product enables the formation of **uniform, smooth, and defect-free layers** even at very low thicknesses.

Its high purity and optimized surface characteristics promote **excellent dispersion stability and strong adhesion**, making it ideal for advanced applications where precision and minimal coating thickness are critical.

		SEPal-S3
Physical appearance		Slurry
Physical Properties	Unit	
D10	μm	0.10
D50	μm	0.30
D90	μm	0.75
D95	μm	0.85
D99	μm	1.00
Specific Surface Area BET	m^2/g	10
Chemical Properties		
Al_2O_3 - on dry basis	%	99.9
Na	ppm	300
Si	ppm	200
Fe	ppm	50

Typical data





SEPal-S7 & SEPal-70 :

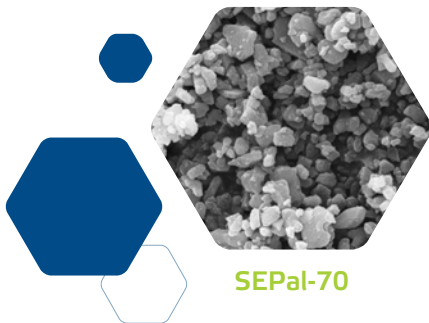
The most widely used grade is specifically designed to meet the demanding requirements of **EV and ESS markets**.

It offers a well-balanced combination of particle size distribution, **high purity, and excellent processability**, ensuring consistent coating performance and reliability at an industrial scale.

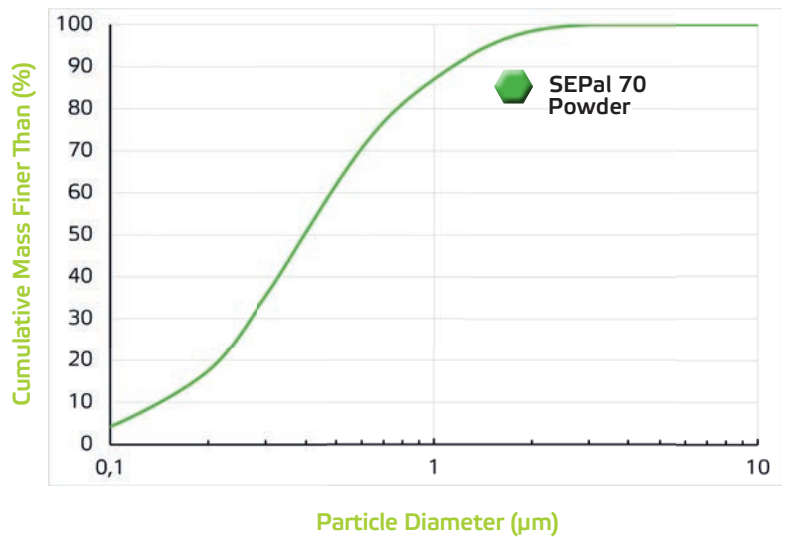
Its **proven robustness and versatility** make it a preferred choice for large-scale battery separator manufacturing where cost-efficiency and performance consistency are essential.

		SEPal-S7	SEPal-70
Physical appearance		Slurry	Powder
Physical Properties	Unit		
D10	µm	0.10	0.20
D50	µm	0.40	0.40
D90	µm	1.00	0.90
D95	µm	1.20	1.40
D99	µm	1.80	2.50
Specific Surface Area BET	m ² /g	10	7.5
Chemical Properties			
Al ₂ O ₃ - on dry basis	%	99.9	99.9
Na	ppm	300	300
Si	ppm	200	200
Fe	ppm	50	50

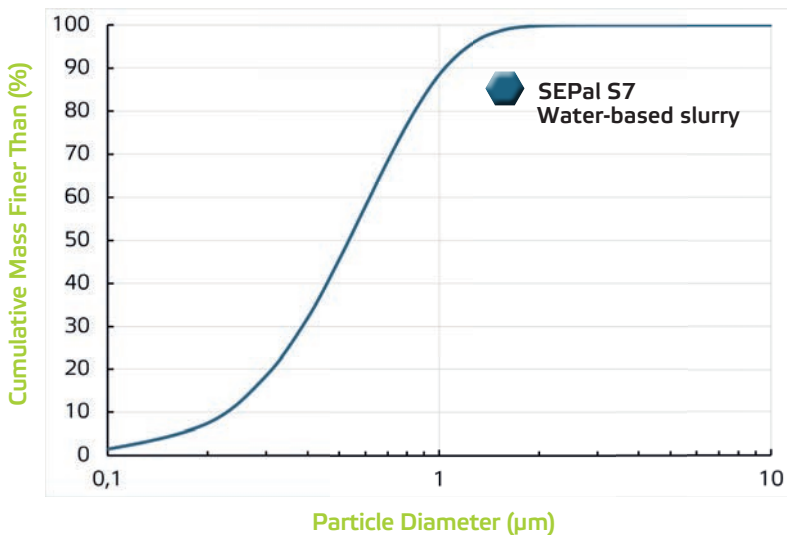
Typical data



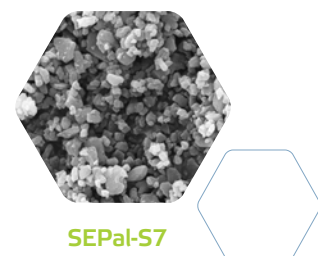
SEPal-70



Particle Diameter (µm)



Particle Diameter (µm)



SEPal-S7



SEPal-S8, SEPal-60 & SEPal-80 :

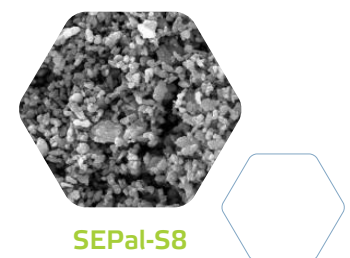
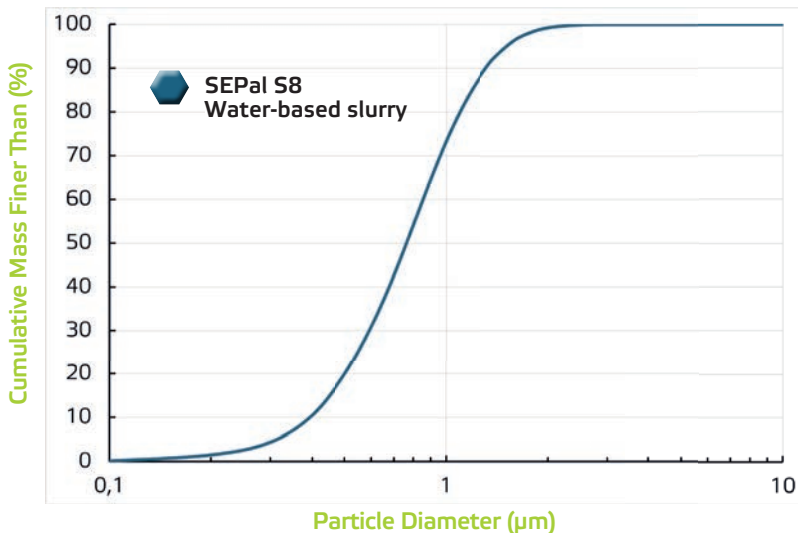
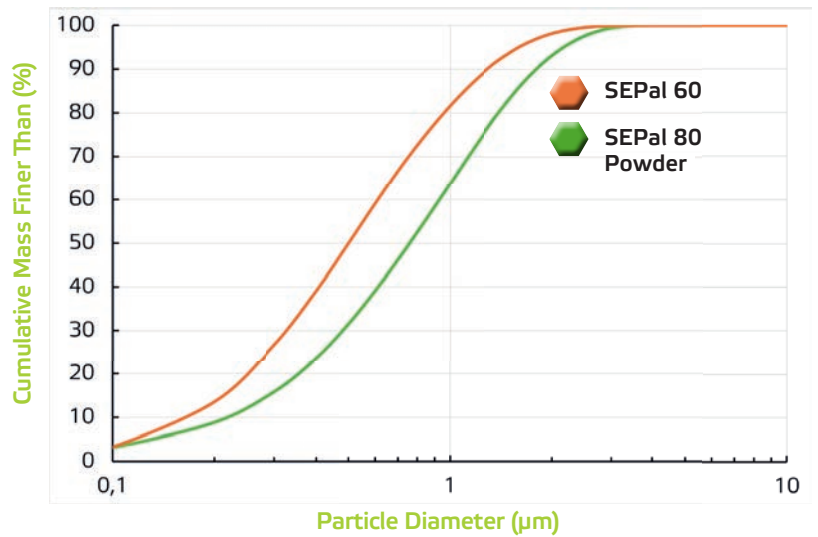
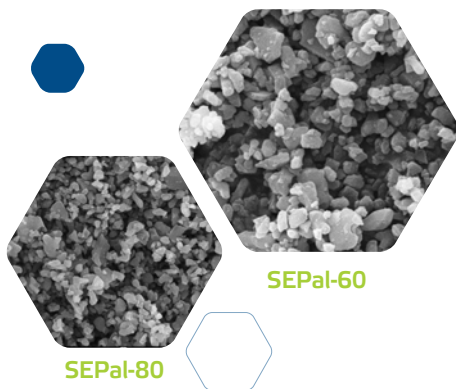
This grade is the preferred solution for both **electrode coatings and thicker separator coatings**.

Its optimized particle size distribution and surface properties enable the formation of uniform layers.

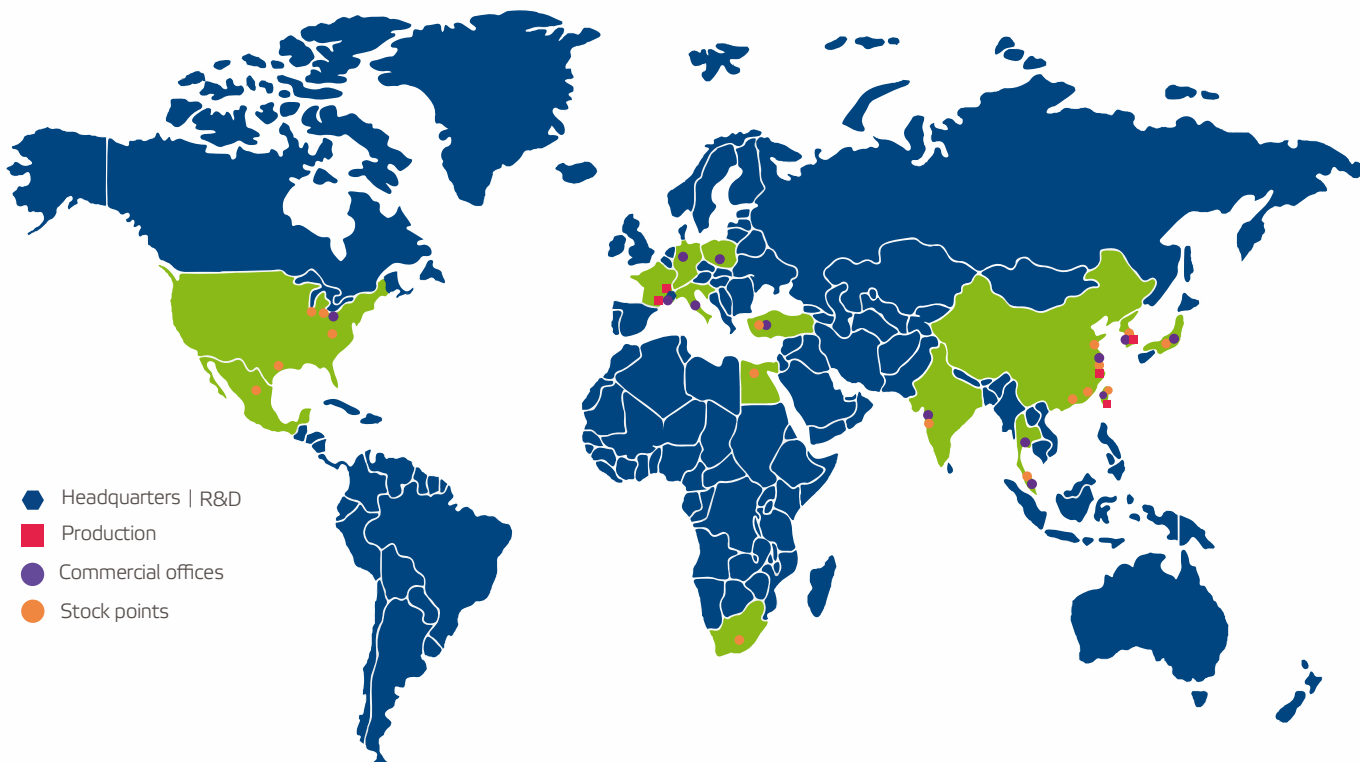
The product ensures **good processability, consistent layer thickness, and reliable performance**, making it a versatile choice for applications demanding both precision and durability.

		SEPal-S8	SEPal-60	SEPal-80
Physical appearance		Slurry	Powder	Powder
Physical Properties	Unit			
D10	µm	0.30	0.30	0.40
D50	µm	0.80	0.55	0.80
D90	µm	1.30	1.10	1.50
D95	µm	1.45	1.50	2.00
D99	µm	2.00	3.00	4.50
Specific Surface Area BET	m ² /g	5.0	5.5	5.0
Chemical Properties				
Al ₂ O ₃ - on dry basis	%	99.9	99.9	99.9
Na	ppm	450	220	450
Si	ppm	250	165	250
Fe	ppm	100	50	100

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: EV-Batteries, Thermal Management, Flame retardant, Advanced Ceramics, Performance Refractories, Specialty Glass, Polishing.

Design : Emeline MARTEL - Communication



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