RAYASIL® 222

Technical Data Sheet

RAYASIL 222 is precipitated silica, synthetic form of silicon dioxide produced through controlled chemical processes, resulting in a fine, white, odorless powder with unique physical and chemical properties. It is widely used across various industries due to its high purity, large surface area, and exceptional absorption capacity.

Applications:

Rubber Industry: Used as a reinforcing filler in tires, shoe soles, and industrial rubber products to enhance durability and performance.

Adhesives and Sealants: Enhances bonding strength and modifies viscosity in adhesive formulations.

Personal Care Products: Used in toothpaste as a cleaning and polishing agent, and in cosmetics for oil absorption and texture improvement.

Catalysts: Serves as a support material for catalysts in chemical processes.

Plastics: Acts as an anti-blocking agent in plastic films and improves the mechanical properties of polymer composites.

Food Industry: Serves as an anti-caking agent in powdered food products like spices, sugar, and salt.

Agriculture: Acts as a carrier for pesticides and fertilizers, ensuring uniform distribution.

Industrial Applications: Used for moisture absorption, thermal insulation, and as a thickening agent in various formulations.

Paints and Coatings: Provides matting effects and improves rheological properties in paints and coatings.

Pharmaceuticals: Functions as a flow aid in tablet manufacturing and as a carrier for active ingredients.

Battery Manufacturing: Improves the performance and lifespan of battery separators.

Physical and Chemical Characteristics

	222P	*222G*	*Unit*	*Method*
Appearance	powder	granules		
60 Mesh Sieve residue	-	≥75	wt%	
Sieve residue 45 µm	≤ 3	-	wt%	
Average Particle Size (D50)	5-12	5-12	µm	Malvern MS 2000
SiO_2 content	≥97	≥97	wt%	ISO 3262-19
Na_2SO_4 content	≤ 2	≤ 2	wt%	Internal method
Fe content	≤ 200	≤ 200	ppm	Internal method
Loss on drying	≤10	≤10	wt%	ISO 787-2
Oil Absorption	250	250	gr/100 gr	ISO 787-5
Specific Surface Area (BET)	180	180	m^2/gr	ISO 9277
Temped Density	240	360	g/l	ISO 787-11
Hardness	6-7	6-7	Mohs	
pH 5 wt%	7-8	7-8		ISO 787-9
Refractive index	1.48	1.48		
Classification	Inorganic			
CAS number	7631-86-9			
Sensitivity	Hygroscopic			
Storage	Dry, tight-closed, at a regular temperature			
Solubility	Insoluble in water			
Package	20	25	Kg	

The above given information is based on mean values. The typical properties and chemical analyses are intended as examples and are not to be considered as substitutes for actual testing and analyses in those situations where properties and chemical compositions are critical factors. Sales and supplies will always be according to our general sales conditions.

MSDS available on request

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