Precipitated silica

DESCRIPTION

Precipitated silica, a form of synthetic amorphous silicon dioxide, is derived from quartz sand, a crystalline form of silicon dioxide. The physical properties of precipitated silica can be manipulated during the manufacturing process to deliver products with a wide range of performance-enhancing features engineered for many different end-use applications.

Chemical formula： $SiO_2.nH_2O$

CAS： 7631-86-9

Main Application: Tire, Industrial rubber, Silicone rubber, Footwear, Food, Feed, Agricultural and Industrial, Coatings, paints and inks, Adhesives and sealants, Battery separator

Min Order：1mt

Purity： 97% min

Appearance： white powder Granular or Micro pearl form

Place of Origin： China

Capacity： 30000 MT per year

Delivery Time： 15 days

Packing: 20kgs net Kraft paper bag or PP woven bag.20kg or 15kg/ sealed woven bag, or big bag package according to your request

Highly Dispersible Silica and Precipitated silica for various applications such as Tires, Industrial Rubber, Food, Oral Care, Paints & Coatings, Plastics etc. Highly Dispersible Silica & Precipitated Silica is produced by using husk as the key raw material which provides distinct properties to silica, resulting in better performance of products.

Tires

Precipitated Silica has become key filler for the tire industry due to its properties and performance. Precipitated silica in tire improves physical & dynamic properties such as tensile strength, abrasion resistance, tear resistance, wet grip etc.

Industrial Rubber Products

Precipitated silica is used as a reinforcing agent in natural and synthetic rubber and products made from rubbers. This silica has application in belts, conveyer belts, gasket & seals, rice rollers and similar applications. The silica particles form physical bonds with the rubber molecule chain to strengthen the vulcanized compound.

WFCY's green silica is added in the rubber products to -

- Improves abrasion resistance and toughness.
- Improves tear resistance and tensile strength and reinforcing strength.
- It provides longevity and durability.
- Enhanced resistance to heat build-up
- Improved color retention and/or translucence

Highly Dispersible Silica For Industrial Rubber Products

WFCY's highly dispersible silica can be used for industrial rubber products for better performance & quality of the end product, and improved process ability.

•Excellent Metal Bonding And High Tear Resistance for Rubber parts for damping and vibration applications like Engine Mounts

•High stiff ness, lower abrasion, higher tear resistance and long durability for Conveyer Belts.

•Higher Stiffness combined with longer elongation and optimized tear resistance for Gaskets & Seals requiring metal rubber bond & withstanding high load

WFCY offers powder, granular form of silica for the application.

Footwear

WFCY offers various grades of green precipitated silica for footwear application. WFCY's green silica enhances various properties in footwear such as abrasion resistance, durability and stiffness. Due to fine particle size, it will easily disperse in the matrix improving it modulus and resilience resulting in better flexibility & comfort.

The advantages:

•It provides longer life and durability.

•Improves abrasion resistance, tear resistance and stiffness.

•Better color effect for colored and semi-transparent soles

WFCY offer powder & granular form of precipitated silica for footwear application.

.Technical Data(Precipitated Silica):

Models	WFCY180	WFCY175	WFCY165
Appearance	White granular or powder	powder	White granular or powder
Color	Better or equal to standard	Better or equal to standard	Better or equal to standard
BET,m^2/g	160-190	160-180	≥190
Heating Loss(105℃),%	4.0-8.0	4.0-6.0	4.0-8.0
Ignition Loss(1000℃),%	<7.0	<8.0	<7.0
PH Value	5.0-8.0	6.5-7.5	5.0-8.0
SiO_2 Content,%	≥97	≥97	≥97
Soluble Salts Content,%	≤2. 50	≤2.50	≤2. 50
DBP oil absorption,cm^3/g	2.50-3.50	2.40-2.80	2.50-3.50
Sieve Residue(45μm)	<0. 5	<0. 5	<0. 5

Toothpaste/Oral care

Precipitated silica used as an abrasive agent in toothpastes due its abrasive nature. Low level of abrasion is sufficient for the efficient cleaning/polishing of the teeth. Abrasion is related to the morphology of the material. It also acts as thickening agent in the toothpaste and it also inert in nature.

Addition of silica in the dental products has benefits such as:

- Better cleaning of the teeth while with very less dosage of silica in the product
- Improved color retention.

WFCY offers different grades of silica for application in the oral care products.

Product Description: The product is highly-purified white particle or loose powder with favorable fluidity. It can be used in powdery food to increase the fluidity of powder, or to improve the diffusion ability of dry powder in liquid. It is mainly used in caking inhibiter, thickener, stabilizer, flavor and spice dryer, etc.

Technical properties:

Items	WFCY281	WFCY 282	WFCY283
Appearance	Super-fine Powder	Super-fine Powder	Micro pearl
Heating loss (105°C) %	≤ 5.0	≤ 5.0	≤ 5.0
Loss on ignition (1000±25°C)%	≤ 8.5	≤ 8.5	≤ 8.5
DBP Oil Absorption Value cm3/g	1.8-2.8	2.8-3.5	2.0-3.0
Silica(dry basis)%	≥ 96	≥ 96	≥ 96
PH-value(10%aqueous solution)	6.0-7.0	6.0-7.0	6.0-7.0
Heavy metal (Pb) mg/kg	≤ 30	≤ 30	≤30
As mg/kg	≤ 3.0	≤ 3.0	≤ 3.0
Pb mg/kg	≤ 5	≤ 5	≤ 5
Na2SO4 %	≤ 4.0	≤ 4.0	≤ 4.0
Average grain diameter d50 μm	10-15	10-15	180-400

Paints, Coatings & Inks

Precipitated silica has been used by Paints, Coating and Ink industry due to various performance related advantages caused by silica. Smaller particle size of silica results in higher flow ability which improves paints, coating & inks' anti settling properties. Its oil absorption properties prevent products spreading ability. Silica acts as a flattening agent that reduces the gloss of paints, varnishes, lacquers and other finishes. It also works as thickening agent that is a rheology modifiers and anti-sag/suspension agent for a broad range of plastisols, inks, adhesives, caulks, and sealants. The advantages:

•Prevents spreading
•Induces anti settling behavior
•Improves dispersion
•lowers viscosity and improves stir-in capability

Plastics

Precipitated silica is used as a thickening, thixotropic and suspending agents in liquid systems, paste emulsion and plastics etc. It Improves flow characteristics of powder and insulating properties to PVC compounds for high voltage cables. It also acts as an anti blocking agent for cellulose hydrate and plastic films.

Advantages:

•Improves extraction properties and better surface finish.
•Prevents surface sticking of Plastic Films
•Easy processability
•Better gloss and appearance.

Silica for Feed additive and Pharmaceutical Carrier is highly-purified white particle or powder with favorable fluidity. It is mainly used in feed additive, vitamin E and other industries. It is favorable carrier for feed flavor enhancement, mildew-proof agent, antioxidant, allicin, swelling agent, caking inhibitor, premix compound, microelement, vitamin and other products.

Technical properties:

Items	WFCY 180P	WFCY 180-1	WFCY180P-1
Appearance	Micro pearl	Powder	Micro pearl
Heating loss (105°C) %	≤ 6.5	≤ 6.5	≤ 6.5
Loss on ignition (1000±25°C)%	≤ 8.5	≤ 8.5	≤ 8.5
DBP Oil Absorption Value DBP cm3/g	2.4-3.0	2.4-3.0	1.8-2.5
Silica(dry basis) %	≥ 96	≥ 96	≥ 96
PH-value(10%aqueous solution)	6.0-7.5	6.0-7.5	6.0-7.5
Heavy metal (Pb) mg/kg	≤ 30	≤ 30	≤30
As mg/kg	≤ 3.0	≤ 3.0	≤ 3.0
Cd mg/kg	≤ 0.5	≤ 0.5	≤ 0.5
Pb mg/kg	≤ 5	≤ 5	≤ 5
Na2SO4 %	≤ 4.0	≤ 4.0	≤ 4.0
Average grain diameter d50 μm	150-250	80-150	180-450

Fumed silica

Fumed silica is the superfine micro-nano fine chemical product, which is divided into hydrophilic type and hydrophobic type in accordance with their different surface treatments. Its appearance is white powder. Native particle size ranges from 5nm to 40nm, with significant functions of thixotropy, reinforcing, thickening and filling. Therefore, it is widely used in the industries of rubber, sealant, plastic, resin, paint, printing ink, papermaking, medicine, cosmetics, food etc.

Chemical formula： SiO2

CAS： 112945-52-5

Min Order： 500KG

Purity： 99% min

Appearance： powder

Place of Origin： China

Capacity： 300 metric ton per month

Delivery Time： 15 days

Packing: 10kg/bag

Hydrophilic Fumed Silica					
Grade		WFCY- 150	WFCY- 200	WFCY- 300	WFCY-380
Form		power			
BET BET Specific Surface Areain2/g		150±15	200±15	300±20	380±20
Ph PH Value		3.8-4.2			
(105C, 2h) wt% Heating Loss		W 1.5			
(1000°C, 2H)wt% Ignition Loss		W 2			
Sio2 %		N 99.9			
g/1 Bulk Density		40-60			
WFCY- 150	It is mainly used for acidic silicone rubber, RTV silicone rubber (low moisture content) and neutral silicone rubber				
WFCY-200	It is mainly used for high-temperature vulcanized silicone rubber, organic silicone defoamer, advanced printing ink, powder coating, PVC resin, unsaturated polyester resin thickening, thixotropic agent, pharmaceutical powder, tabular preparation, cosmetics etc.				
WFCY-300	It is mainly used in paints, coatings, printing inks and unsaturated polyester resins; sealants and silicone adhesive; elastomers, especially HT V and RTV Silicone rubber; films cosmetics and heat insulator				

WFCY-380	It is mainly used for silicone rubber, silicone grease and sealing materials of capacitance packaging with high transparency and high tear resistance
Package	10kg.
	10kg multi-layer paper compound material bag.