Brief Introduction of Calcium Sulfate Whisker Products

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Brief Introduction of Calcium Sulfate Whisker /硫酸钙晶须

Name: Calcium Sulfate Whisker **Abbreviation**: CSW **Chemical formula**: CaSO4
International Commodity Name : ONODA-GPF;

Calcium sulfate whisker is a new type of needle-like, uniform cross-section, complete shape and perfect internal structure fiber sub-nanomaterials grown in single crystal form. The morphology of the whisker is due to the difference of the growth rate of the crystal in the axial direction and in the lateral direction. The whisker mainly grows along the spiral dislocation in the axial direction. The side of the whisker is a low-energy surface, which grows very slowly and diffuses to the spiral feeding of the outcrop on the tip or the base surface of the whisker through the surface.

picture of calcium sulfate whisker products

Microstructure of calcium sulfate whiskers

Main Test Index of Products

Common Product Index:

Appearance: White flocculent powder	Whiteness: more than 90%
Fineness: ≤80 mesh	Chemical Constituents: $CaSO_4$
Loose density: 0.3-0.65 ($g.cm^{-3}$)	Density: 2.69 g/cm^3
Purity: ≥95%	Shape: Needle Fiber
Length: 10 - 300μm	Diameter: 1 - 4μm
Length-diameter ratio: 40-80 (90%)	Mohs hardness: 2 – 4
Heat resistance: 1000℃	Melting point: 1450℃
Moisture: < 1.5%	PH: ±0.5

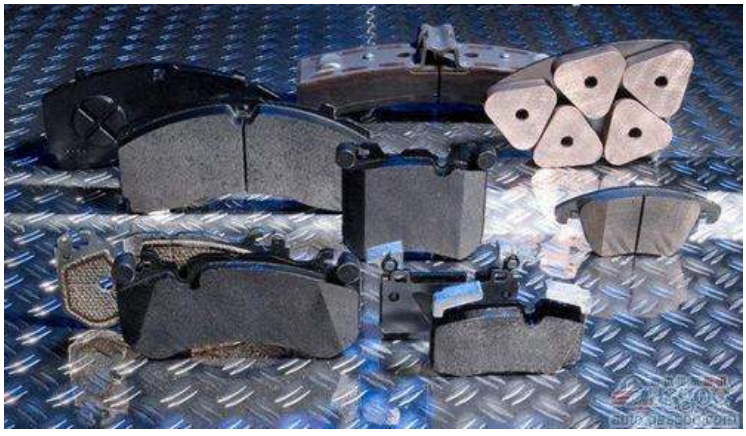
Water solubility: ≤0.02% (22℃)

Packaging: 25 kg/bag,(Lined with plastic bags, Covered with kraft paper bags)

Main Uses of Calcium Sulfate Whiskers

(1) Calcium sulfate whisker as friction material

Calcium sulfate whisker can replace asbestos as a new friction material, which can improve the wear resistance, friction stability and service life of friction material.

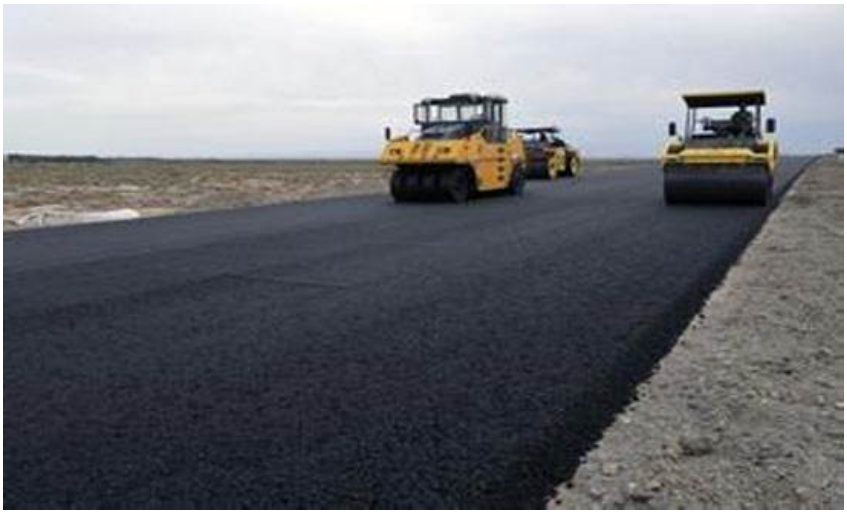


(2) Calcium sulfate whisker as reinforcing filler

Calcium sulfate whiskers can be used as reinforcement condiments for plastics, rubber, polyurethane and metals. If calcium sulfate whiskers are added to plastics, their mechanical strength, heat resistance and dimensional stability can be improved.

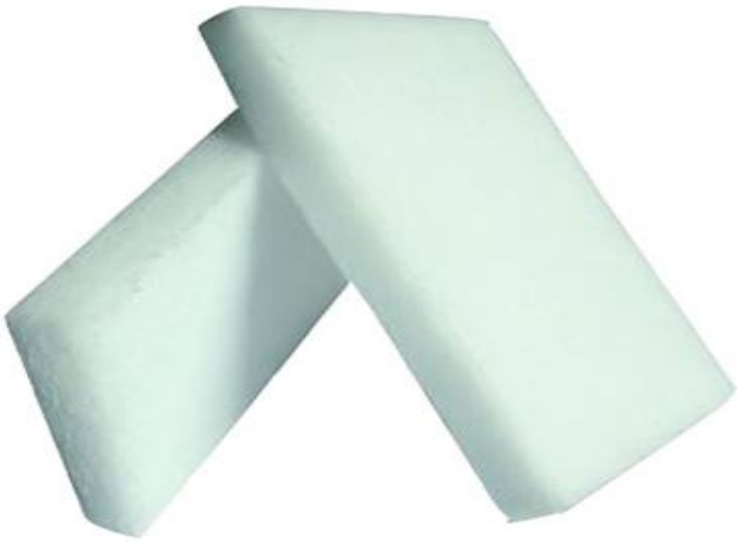
(3) Calcium Sulfate Whisker as Asphalt Modified Material

Calcium sulfate whisker as asphalt filler and reinforcing agent has good compatibility with asphalt and high interfacial bonding force. It can increase the softening temperature and penetration of asphalt and reduce its ductility.



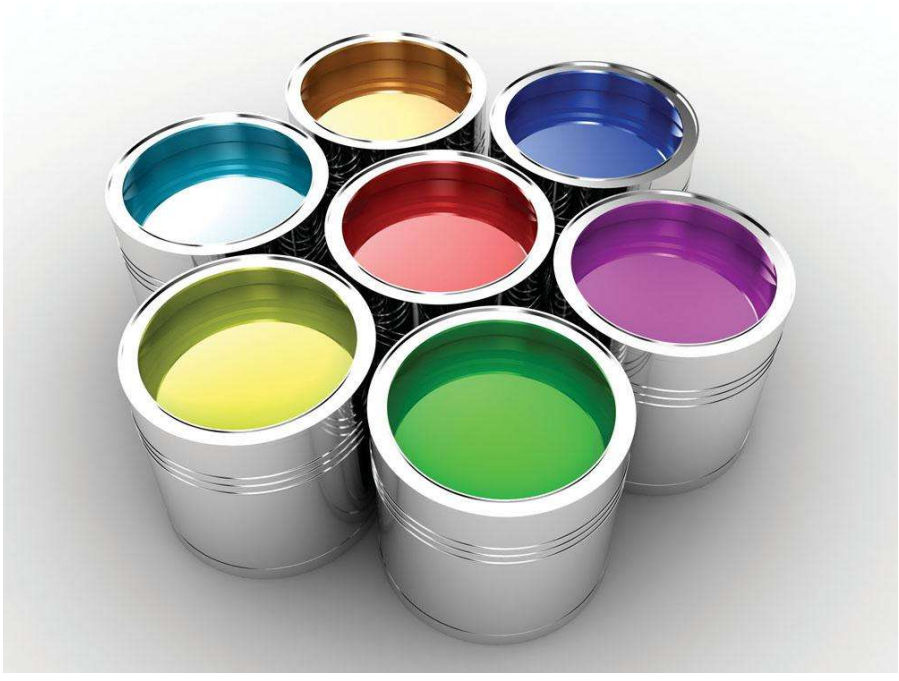
(4) Calcium sulfate whisker as a filter material

Calcium sulfate whisker has large specific surface area, small loose density, high fluffy degree, non-toxic and non-polluting. It can be used as filter material for waste gas and wastewater, and even as filter material for beverages and medicines.



(5) Calcium Sulfate Whisker as Paint and Paint Filler

Calcium sulphate whisker as coating and paint filler can effectively improve the adhesion, high temperature resistance, insulation and dry cracking resistance of coatings and paints, and can also improve whiteness to a certain extent.



(6) Calcium Sulfate Whisker as Paper Filler

Calcium sulfate whisker can not only improve the brightness and strength of paper, but also reduce the consumption of natural plant fibers and the discharge of wastewater in pulping process.