



Flame retardant

DovaFR ZrP 309

Edition Date May28, 2018

Edition Number 2

Zirconium hydrogen phosphate (ZrP)

Product Description

DovaFR ZrP 309 is available as a newly developed and multi-functional mesoporous material and also one of the well applied solid acid materials in the form of layers. DovaFR ZrP 309 has a good potential prospect in applying to chemistry, optics, electronics, materials science and Environics, etc. due to its role of multi-functional material.

Benefits

- Dova FR ZrP 309 is high stability with its chemical property and layer structure.
- It is with relative bigger proportion of surface percentage (total area of the item). high electric density on its surface(charge numbers on its surface per unit), is a strong type of solid acid.
- It is It has high stability and intensive mechanical strength (When this material encounters with external force, the unit area can bear the highest capacity).
- Dova FR ZrP 309 has high crystallinity with its special method.
- Dova FR ZrP 309 can be classified as a-Zrp, y-zap, t-zap (still under experiment) these three types so far. a-Zrp is available in Dovamat.

Specifications

Characteristics	Unit	Standard Request	Test Method
Appearance		White powder	Visual
Zr (HPO₄) 2·H₂O content	% (w/w)	99 min	Dovamat Test
ZrO₂ content	% (w/w)	38-40	Dovamat Test
Fluoride	% (w/w)	0.002	Dovamat Test
Water insoluble	% (w/w)	99.9 Max	Dovamat Test
Loss of Moisture	% (w/w)	6 Max	Dovamat Test
D50 (Average Particle Size)	Mm	1.68	Dovamat Test
pH Value		3~5	Dovamat Test
Density	g/cm ³	2.66	Dovamat Test

¹⁾ Delivery specification: The product is monitored on a regular basis to ensure that it adheres to the specified values.

²⁾ Technical data: The technical data are used solely to describe the product and are not subject to regular monitoring.

Application

Dova FR ZrP 309 is can be applied in the below areas:

Environment Side: Attached to CO₂ or gas characterized with acid. It can be produced with: civil construction materials, manned fabricated plates, paper and coatings etc. featuring its absorption with composite multifunctional materials (methanol, ammonia).It is with strong affinity with soda, so that it can produce composite catalyst after its combination with Alcohol, pyridine and some other polar molecules, which can protect our environment. It can produce pesticide with PCBS, PAHS, PCDDS and etc.

Anti-bacteria side: Work as anti-bacteria material carrying silver. anti-static electricity shoes, conductive electricity shoes. It can work as an additive in plastic, rubber, fiber, coating, paper, adhesives and ceramics and glass to make materials with anti-bacteria. Work as Silver zinc inorganic anti-bacteria agent to dilute composite inorganic anti-bacterial agent, anti-bacterial fiber master. batch, cotton fiber anti-bacteria finishing agent, velvet anti-bacteria and odor finishing agent.

Modified plastics: **1)** In application of modification plastic for low-smoke halogen-free flame retardant, the oxygen index of most common plastics cannot reach 27, while in flame retardant occasions the oxygen index is required to be above 30. Added zirconium phosphate, the index of PP composite material can reach 33, FR level is V-0; For PA6, oxygen index can be up to 38.7, and FR level is

V-0. It can suppress the melting and dripping of the matrix, and to be formed a stable carbon layer. **2)** The performance function is enhanced to improve the mechanical strength, bending strength, dimensional stability and thermal stability and other physical properties, so that ordinary plastics have special functions that they did not have before, such as: antibacterial, flame retardant, and high temperature resistance.

Electrochemistry equipment: Solid phase gas sensor; Polymer inorganic proton conductive membrane material; Complete solid phase fuel battery; Electroluminescent material; Molecular Electronics Devices, Nonlinear optical material. Artificial photosynthesis devices⁶; Film (as a photosensitive combination packing) Bio Filed: Applied to gene storage as a material including DNA, protein and some other nanometer composite materials formed by bio active molecular.

Delivery Form

White powder

Packaging

Dova FR ZrP 309 is supplied in 5kg paper bag/ 10kg per drum.

Storage

Dova FR ZrP 309 is in sealed containers at room temperature in a dry place. Partially emptied containers should be carefully resealed after use.

Minimum shelf life is 24months from the date of shipping when stored according to the said conditions.

Contact Us

Please contact us for safety and regulatory details or the Material Safety Data Sheet (MSDS).