Shijiazhuang City Xinsheng Chemical Co., Ltd
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ZINC PHOSPHATE

Technical Data Sheet

Item	Information
Chemical name	Zinc phosphate; zinc phosphate white; zinc phosphate dihydrate
English name	Zinc phosphate
Formula	Zn3(PO4)2.2H2O
CAS No.	7779-90-0
Physical properties	Non-toxic, odorless white powder. Slightly soluble in water; soluble in nitric acid and hydrochloric acid.
Product type	Anti-rust and anti-corrosion pigment

Applications

Zinc phosphate is a white, non-toxic anti-rust pigment and a new generation of pollution-free anti-corrosion pigment with excellent rust-preventive performance. It can effectively replace traditional anti-rust pigments containing heavy metals such as lead and chromium, including red lead and zinc chrome yellow. It is suitable for steel structures, ships, electrical appliances and equipment.

It is mainly used in alkyd, phenolic, epoxy and other coating systems to prepare water-resistant, acid-resistant and anti-corrosion coatings such as phenolic paint, epoxy paint, acrylic paint, high-build paint and water-soluble resin paint. It is widely used in anti-rust coatings for ships, automobiles, industrial machinery, light metals, household appliances and food-grade metal containers.

It can also be used in water-soluble coatings and non-toxic anti-rust coatings, as a flame retardant for chlorinated rubber and synthetic polymers, and for steel phosphating treatment. Xinsheng has developed zinc molybdenum phosphate (ZPM), zinc aluminum phosphate (ZPA), high-gloss ZPL and tetrahydrate products for water-based coatings.

Key Features

Compatibility: suitable for alkyd epoxy ester, chlorinated rubber, polyurethane and other media.

Corrosion resistance: physically blocks water and salt penetration. Zinc phosphate primers have good brushing performance and are suitable for airless and conventional spraying.

Non-toxic: safer than zinc chromate, zinc tetroxychromate, barium chromate and other corrosion-resistant pigments.

Excellent adhesion: promotes good intercoat adhesion in primers, especially under high humidity conditions.

XINSHENG

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TECHNICAL PARAMETERS OF ZINC PHOSPHATE

Test item	ZP-O	ZPA	ZPH High Purity	Tetrahydrate	ZPE Environmental	ZPL	ZPM
Whiteness (%)	80-90	>=92	>=92	>=92	>=95	>=92	>=92
Zn (%)	>=45	>=42	>=49	>=45	>=49	>=45	>=45
PO4 (%)	20-30	43-47	40-45	40-45	43-47	20-30	40-45
Al2O3 (%)	---	7-10	---	---	---	---	---
MoO3 (%)	---	---	---	---	---	---	1-1.5

Packaging and Storage

Standard package: 25 kg per bag, inner plastic and outer woven bag or composite paper bag.

To avoid weathering, store in a dry place and avoid severe temperature changes. Opened packages should be resealed to prevent moisture absorption and contamination. Shelf life: 2 years.