

Zinc Phosphate (ZP-L)

Key Feature: No Loss of Gloss

ZP-L is a phosphate anti-corrosive pigment produced by modifying zinc phosphate. It can be used to formulate a wide range of anti-rust coatings. With its low refractive index and high transparency, ZP-L has minimal impact on gloss. It is especially suitable for waterborne alkyd systems, where it delivers optimal performance.

In waterborne systems, zinc phosphate (ZP-L) is a colorless anti-corrosive pigment with good stability, water resistance and corrosion protection. It provides both protective and decorative functions in a single coating and is compatible with virtually all coating binders, helping maintain proper consistency and storage stability.

Applications and Use

ZP-L is widely used in coil coatings, refurbishment coatings for pre-painted steel and other industrial coating materials. It is easy to tint and can be blended with other pigments to produce a wide range of colors. A dosage of 3-8% is generally recommended; adjust as needed to achieve optimum corrosion and rust protection.

Test Items	ZP-L	Test Method
Whiteness (%)	85-95	Whiteness Meter
Moisture (%)	≤2.0	GB/T5211.3
pH Value	5.5-7	T1717—1986
Oil Absorption (%)	30±5	GB/T 5211.15
Sieve Residue (%) 45 μm	≤0.5	GB/T 5211.18
Lead (Pb, %)	≤0.02	GB9723---2007

Standard Packaging: 25 kg/bag, with an inner plastic liner and outer woven bag.

Transport and Storage

To prevent weathering, store in a dry place and avoid sharp temperature fluctuations. Reseal opened bags to prevent moisture absorption and contamination.

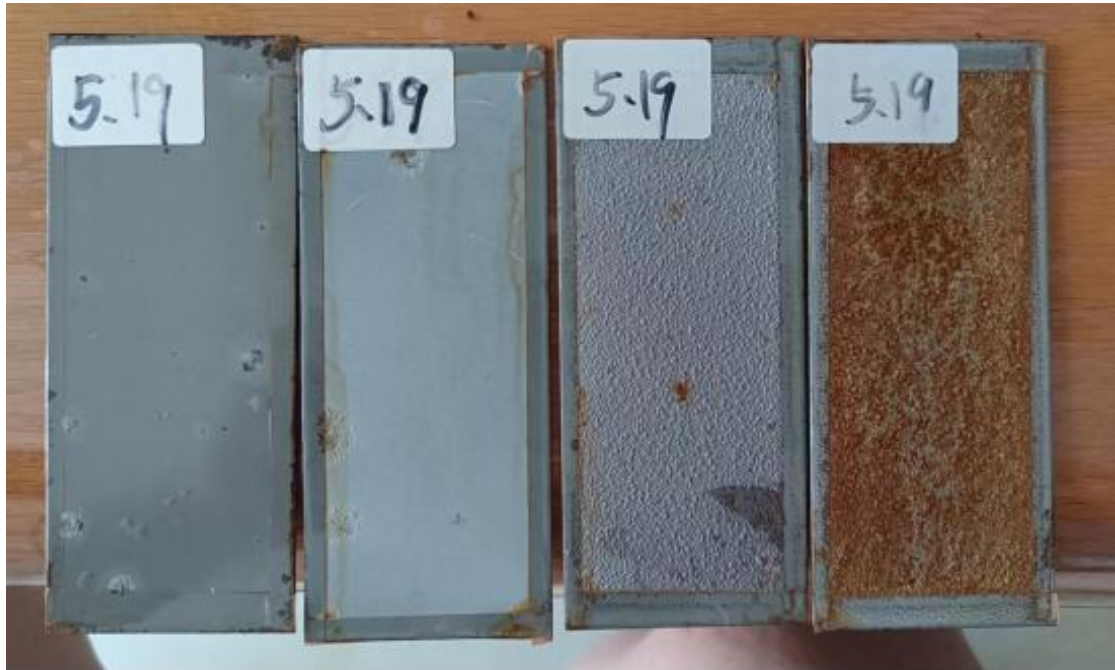
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Performance Testing of ZP-L Anti-Corrosive Pigment in a Waterborne Alkyd System

Reference Formulation for ZP-L

Phase	Raw Material	Amount	Manufacturer
Millbase	C205W	20	Liyang
	C268W	10	Liyang
	H2O	9	
	BYK-191	0.6	BYK
	TEGO4100	0.2	TEGO
	BYK-024	0.2	BYK
	HF Biocide	0.1	
	Titanium Dioxide	10	
	ZP-L	6	
	Precipitated Barium Carbonate	11	
	DBG Solvent	1	
Let-down	C205W	18	
	T240S Flash-Rust Inhibitor	0.5	
	010 Drier	1.0	
	RM-8W	1.0	
	H2O	11.4	
Total		100	
	Fineness	≤25 μm	
	Viscosity	300-400 mPa·s	



High-Gloss ZP
ZP-L

Modified TP
MY-1

Modified TP Competitor
Competitor

Blank
Blank

Waterborne Alkyd Emulsion Primer

Salt-spray test performed for 120 hours in accordance with GB/T 10125-2021 (ISO 9227:2017, MOD).

Substrate: 0.8 mm CR4-grade cold-rolled carbon steel panel

Film Thickness: 20-25 μm

Salt-Spray Test and Gloss Comparison (only the image above is available)

