

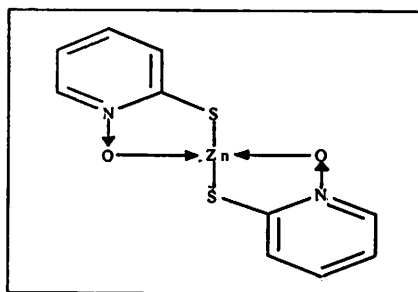
# Kumar Organic Products Limited

## KOPHTHIONE

Zinc Pyrithione was first reported in the 1930s. It has two pyridine-derived chelating ligands bound to zinc via oxygen and sulfur atoms. In cosmetics and personal care products, Zinc Pyrithione functions as an antidandruff agent, antimicrobial agent, hair conditioning agent, and preservative.

Zinc pyrithione has been used, as an anti-dandruff agent, for more than 60 years, in concentrations up to 1-2%. It is effective against a wide variety of pathogenic bacteria. Its other applications include treatments of psoriasis, eczema, ringworm, fungus,

athletes' foot, dry skin, and atypical dermatitis. Due to its low solubility in water, zinc pyrithione is suitable for use in outdoor paints and other products that provide protection against mildew and algae. Its decomposition by ultraviolet light is slow, providing years of protection even against direct sunlight. Antifungal effect of Zinc pyrithione is most likely lies in the ability of an un-ionized pyrithione molecule to disrupt membrane transport by blocking the proton pump that energizes the transport mechanism.



Chemical name : Bis-[1-hydroxyl-2(1H)-pyridinethionato-O-S]-zinc  
Molecular Formula : C<sub>10</sub>H<sub>8</sub>N<sub>2</sub>O<sub>2</sub>S<sub>2</sub>Zn  
CAS # : 13463-41-7  
Molecular weight : 317.70  
EINECS : 236-671-3

### Physico – Chemical Properties:

#### Zinc Pyrithione 50% FPS

Appearance	Off-white suspension
Assay	Not less than 48% (w/w)
Zinc Content	9.3 to 11.3%
pH (5% slurry in pH 7 water)	6.5 to 9.0
Solubility	Practically insoluble in water (8 ppm at neutral pH)

#### Zinc Pyrithione 40% FPS

Appearance	Off-white suspension
Assay	Not less than 38% (w/w)
Zinc Content	15 to 19%
pH (5% slurry in pH 7 water)	8.5 to 9.5

#### Zinc Pyrithione Powder

Appearance	Off-white powder
Assay	95% (w/w) min
Zinc Content	19 to 22%
pH (5% slurry in pH 7 water)	6.5 to 9.0

### Application:

Antidandruff formulation, outdoor paint, coating agent for air conditioner covers, sealants for bathrooms, pools, windows and as cosmetic preservative.

[www.kumarorganic.net](http://www.kumarorganic.net)

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