

## ANTI DANDRUFF AGENT Product Bulletin

### KROMACTIVE ZPT 48

INCI Name: Zinc Pyrithione

#### Description

Kromactive ZPT 48 is 48% water suspension of Zinc Pyrithione with carefully selected particle size. It is an effective anti-microbial agent to fungi and bacteria, which can effectively kill the fungi that cause the dandruff. It has been used as antidandruff agent for a long time.

#### Typical properties (not intended as product specification)

|                                     |                  |
|-------------------------------------|------------------|
| Appearance                          | milky suspension |
| Active Content (%)                  | > 45%            |
| Solid content                       | > 48%            |
| pH value (1% sol, 25°C)             | 5.0-8.0          |
| Particle size ( $1\mu\text{m}$ ; %) | > 95.0           |

#### Properties

- Poorly soluble in water, Zinc Pyrithione can be dispersed in shampoo system. Micro particle ( $< 1\mu\text{m}$ ), will improve the efficacy maximizing the active surface of the product.
- Zinc Pyrithione can be used over the pH range from 4 to 10. Below pH 4.5 the zinc complex dissociates, forming free pyrithione. Above pH 9.5 the zinc complex hydrolyzes to yield ionized pyrithione and zincate species. Both free and ionized pyrithione are microbiologically active, but being much more water soluble than the zinc complex, they are more susceptible to degradation from exposure to light or oxygen.
- Some chelating agents, such as ethylenediaminetetraacetic acid (EDTA), will chelate the zinc from zinc pyrithione, forming the anion of pyrithione and the zinc complex of EDTA. This will not harm the preservative action of the pyrithione but does consume EDTA.

#### Applications

- Anti dandruff shampoo

#### Formula Guidelines

Typically used at a level of:

- Shampoo: 0.5 – 2.0%

### **Cautions**

Possible irritation to skin and eye. If splash into eyes, use plenty of water immediately. Safe at recommended usage level. Metal ions can cause color changing. Tank made from 316L stainless steel or porcelain enamel is recommended to use in production.

### **Storage & Handlings**

Standard packing: 40 kg drums.

Storage: keep in a cool, dry, ventilated and lightless place.  
Shelf life: 12 months.