Technical data sheet

PIROCTONE OLAMINE

Introduction

Piroctone Olamine is known for its bacteriostatic and fungistatic properties specifically working against Pityrosporum ovale, which lives on the skin and is associated with dandruff and other manifestations of flaking on the face and scalp. It is often used in shampoo as a replacement of commonly used Zinc Pyrithione. It is used over 30 years in the personal care formulations and also used as preservative and thickening agent.

In a comparative clinical study, it was demonstrated that Piroctone Olamine outperformed Ketoconazole and zinc pyrithione based shampoo in its ability to increase hair shaft diameter in androgenic alopecia. Piroctone Olamine also reduced sebum production.

INCI Name

Piroctone Olamine

Registrations

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>EINECS/ELINCS No.</th>
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<tbody>
<tr>
<td>68890-66-4</td>
<td>272-574-2</td>
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Chemical formula: $C_{14}H_{23}NO_2.C_2H_7NO$
Chemical structure:

![Chemical structure image]

**Specifications**

- Appearance: white or slightly yellow powder.
- Melting range: 133.6 – 134.9°C
- pH: 9.36
- Loss on drying: 0.28%
- Monoethanolamine content: 20.23%
- Assay by titration: 99.66%

**Solubility**

Freely soluble in 10% ethanol in water, soluble in solution containing surfactants in water or in 1%-10% ethanol, slightly soluble in water and in oil. The solubility in water varies by pH value, and is a little larger in neutral or weak basic solution than in acid solution.

**Functions**

- Antidandruff action.
- Antibacterial and antifungal effect.
- Preservative.
- Deodorant active.
- Supports anti-acne treatments.
Applications

- Shampoos.
- Bath foams.
- Baby powders.
- Creams, lotions.

Recommended used:

- Antidandruff hair keep: 0,1 - 0,8 % active ingredient.
- Antidandruff fixing agent: 0,05 - 0,2 % active ingredient.
- Antidandruff hair emulsion: 0,1 - 0,3 % active ingredient.
- Antidandruff hair supporting: 0,05 - 0,1% active ingredient.
- Preservative: 0,2-0,5 % active ingredient.
- Smell-eliminating agent: 0,2-0,5 % active ingredient.
- Smell-eliminating scented soap: 0,2-0,5 % active ingredient.
- Other products: 0,1-1,0 %

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.