



ELRASA - POOAnTM (Piroctone Olamine)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White or slightly yellow crystalline powder.
Odor	Faint characteristic odour
Molecular Weight	298.42 g/mol
Density / Specific Gravity	1.1 g/cm ³ at 20°C
Viscosity	Piroctone olamine increases the viscosity of many surfactant systems.
Refractive Index	1.57
pH (1% aqueous suspension)	8.5-10.0 (at 20°C)
Assay / Purity	≥99.0%
Chemical Properties	
pKa	7.4
Ionic Nature	Organoammonium salt
Incompatibilities	Degrades in the presence of cupric and ferric ions. Incompatible with strong oxidizing agents and strong acids.
Hazardous Reactions / Decomposition Products	Under fire conditions, hazardous decomposition products formed include carbon oxides and nitrogen oxides (NO _x).
Thermal Properties	
Melting Point	130-135°C
Boiling Point	344.1 °C
Flash Point	161.9°C
Decomposition Temperature	Decomposes under direct ultraviolet radiation.
Thermal Stability	Stable to heat, and to short periods of high temperature above 80°C. In a shampoo of pH 5.5-7.0, it remains stable after one year of storage at a temperature over 40°C.
Solubility	
Solubility in Water	Slightly soluble. The solubility varies by pH value and is slightly larger in neutral or weak basic solution than in acid solution.
Solubility in Ethanol	Freely soluble in 10% ethanol in water.

Property	Specification
Solubility in Methanol	Soluble.
Solubility in Acetone	Soluble.
Solubility in Chloroform	Slightly soluble.
Solubility in Propylene Glycol	Good solubility.
Solubility in Surfactant Solutions	Soluble in solutions containing surfactants.

2. Processing Methods

Anti-Dandruff Shampoo

A basic anti-dandruff shampoo formulation. The addition of Piroctone Olamine at 0.3-0.4% can increase the viscosity to approximately 3000 mPa.s, potentially reducing the need for additional thickening agents.

Key Ingredients	Indicative Dosage (% w/w)
Sodium Laureth Sulfate	8.0
Magnesium Lauryl Ether Sulfate	4.0
Cocamidopropyl Betaine	3.0
Piroctone Olamine	0.3 - 0.4
Water	q.s. to 100

Shampoo with Cationic Surfactants

Disperse the cationic surfactant in water, then add other surfactants and heat to 75-80°C to dissolve. Cool the mixture. Disperse Piroctone Olamine in a suitable quantity of water before adding to the main system. Adjust the final pH with citric acid. The addition of cationic and amphoteric surfactants can considerably increase the substantivity of Piroctone Olamine on hair.

Key Ingredients	Indicative Dosage (% w/w)
Water	q.s. to 100
Cationic Surfactant (e.g., Polyquaternium-10)	1.0
Amphoteric Surfactant (e.g., Cocamidopropyl Betaine)	1.0
Alkyl Ether Sulfate Sodium Salt	15.0
Piroctone Olamine	0.5
Citric Acid	to adjust pH to 6.0-6.2
Fragrance	q.s.

3. Dosing by Application



Application	Recommended / Max Dosage
Shampoos	0.3 - 1.0
Hair Conditioners / Emulsions	0.1 - 0.3
Hair Tonics / Leave-on products	0.05 - 0.1
Hair Styling Gels / Fixing Agents	0.05 - 0.2
Antiperspirants and Anti-acne products	0.1 - 0.3

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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