



ELSURFAC – PEG150dS™ (PEG-150 Distearate)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White to off-white solid [Authoritative]
Physical Form	Commonly supplied as waxy flakes with a characteristic odor.
Odor	Characteristic.
Molecular Weight	Average 7,170 g/mol.
Density / Specific Gravity	1.0 g/cm ³
Viscosity	≥80,000 mPa·s (10% aqueous solution, 20°C).
pH (2% aqueous solution)	6.0 - 8.0 (at 25°C).
Assay / Purity	≥98.5% (Active matter content).
HLB Value	18.9.
HLB Comparison	PEG-150 Distearate has a high HLB value (Hydrophile-Lipophile Balance) of approximately 18-19, making it a very effective oil-in-water (o/w) emulsifier and solubilizer. This is significantly higher than other common nonionic surfactants like Glyceryl Stearate (HLB ~3-4) or Sorbitan Oleate (HLB ~4.3), indicating its strong hydrophilic nature.
Chemical Properties	
Ionic Nature	Non-ionic.
Hazardous Reactions / Decomposition Products	Stable under recommended storage conditions.
Thermal Properties	
Melting Point	50-60°C.
Boiling Point	Not applicable.
Flash Point	267.40 °C (513.00 °F).
Thermal Stability	Maintains stable performance within a temperature range of -10°C to 80°C.
Solubility	
Solubility in Water	Soluble. Appears slightly cloudy in water but clear in surfactant-containing solutions. Must be heated above its melting point for effective dissolution.



Property	Specification
Solubility in Ethanol	Soluble.
Solubility in Glycerol	Soluble in polar organic solvents like glycerin.
Solubility in Mineral Oil	Insoluble.
Solubility in Vegetable Oil	Insoluble.

2. Dosing by Application

Application	Recommended / Max Dosage
Shampoos, Conditioners, Shower Gels	0.5 - 5.0%
Baby Shampoos, Bubble Baths	0.5 - 5.0%
Creams, Lotions, Emulsions	0.5 - 5.0%
Facial Cleansers, Body Washes	1.0 - 8.0%
General Personal Care Products	0.2 - 2.0%

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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