

SABOWAX PIS

A high-performance polymeric W/O emulsifier enabling very fluid, stable water-in-oil emulsions with exceptional tolerance to water load, electrolytes and challenging formulation conditions.

INCI name: PEG-30 Dipolyhydroxystearate
CAS number: 70142-34-6

OVERVIEW

SABOWAX PIS is a **polymeric water-in-oil emulsifier** based on ethoxylated polyhydroxystearic acid, designed to create **highly stable and low-viscosity W/O emulsions**. It is particularly effective in systems requiring **high internal water phase**, strong **resistance to electrolytes and extreme pH**, and efficient **dispersion** of solid particles.

Thanks to its unique molecular architecture, SABOWAX PIS can function as a solo emulsifier or as part of a structured emulsifier system, delivering **light skin feel**, excellent spreadability and long-term emulsion stability. Its polymeric nature reduces droplet coalescence and supports the formation of robust interfacial films, even under **demanding formulation conditions**.

- NOI (ISO 16128): 0
- REACH: exempted (polymer)
- IECIC Listed and Annex 14 available

TECHNICAL CHARACTERISTICS

- **Type:** Polymeric W/O emulsifier
- **Appearance:** waxy solid
- **HLB:** 5.5
- **Melting point:** approx. 38 °C
- **Solubility:** soluble in alcohol
- **Processing:** add to the oil phase together with lipophilic components before emulsification
- **pH tolerance:** excellent resistance to extreme pH and high electrolyte content
- **Stability:** polymeric structure helps prevent coalescence and phase separation

FUNCTIONS

- **Primary W/O emulsifier:** enables the formation of stable water-in-oil emulsions.
- **High internal phase enabler:** allows incorporation of very high water levels, up to 90% internal phase.
- **Emulsion stabilizer:** polymeric structure minimizes droplet coalescence and enhances long-term stability.
- **Dispersing agent for solids:** efficiently wets and disperses pigments, iron oxides and inorganic UV filters in the oil phase.
- **Texture modulator:** produces very fluid, low-viscosity emulsions with light, elegant skin feel.
- **Formulation robustness enhancer:** maintains emulsion integrity in the presence of electrolytes, alcohols and polyols.

FORMULATIONS

- Very low-viscosity stable W/O emulsions
- W/O lotions and creams
- High internal phase (HIP) W/O emulsions
- Water-free G (Glycerin)/O emulsions
- W/O emulsions with high electrolyte content

APPLICATIONS

- Skin care (W/O lotions and creams)
- Daily skincare with SPF
- Sun care and water-resistant sunscreens
- Make-up (foundations, complexion products)
- Cleansing milks
- Antiperspirants and deodorants
- High-performance W/O systems for challenging actives



SABO S.p.A.

Registered Office · Via Caravaggi 9 · 24040 Levate (BG) Italy
Administrative Headquarter · Viale Albini 12 · 24121 Bergamo (BG) Italy
T. +39 035596000 · F. +39 035594400
personalcare@sabo.com

sabo.com