

A Detailed Overview of Durosoft PG4L-SG

Durosoft PG4L-SG is a sustainable, PEG-Free, RSPO-SG certified emulsifier and emollient ideal for oil-based formulations. Derived from natural oils, it offers a seamless, eco-friendly solution that enhances skin feel and slip, whilst it provides a stable formula.




Durosoft PG4L-SG is a naturally derived, sustainable, non-ionic emulsifier created from RSPO-certified segregated palm oil, making it ideal for personal care formulations that prioritize environmental responsibility. This PEG-free polyglyceryl ester is designed for oil-in-water emulsions, offering exceptional stability even in low-energy processes like cold formulations, supporting a wide range of cosmetic applications.

With its biodegradable nature, Durosoft PG4L-SG excels in skin and hair care products, providing mildness and

reducing potential irritants. Its versatility extends to natural and organic formulations, enhancing textures without compromising product integrity.

As consumer demand grows for eco-conscious beauty, Durosoft PG4L-SG offers formulators an excellent choice for creating high-performance, sustainable products. It balances efficiency, stability, and environmental considerations, making it a valuable addition to any formulation designed for sensitive skin, environmental responsibility, and innovation.

- » INCI: Polyglyceryl-4 Laurate
- » Appearance: Amber syrup
- » HLB: 8-10
- » Average molecular weight: 450.72 gmol⁻¹
- » Usage level: Emulsifier/Emollient 2-10%
- » Inter-facial Tension: <1.5 mN/m
- » Non-ionic O/W emulsifier for oil rich products
- » Emollient to improve slip + conditioning
- » Safe for use in oral care products (3% inclusion)
- » Dermatologically tested



The Benefits of Formulating With Durosoft PG4L-SG

Lipophilic

Due to its lipophilic nature, Durosoft PG4L-SG integrates seamlessly into the oil phase of formulations. This characteristic ensures that it blends well with other oils, enhancing the overall stability and consistency of the product. By being part of the oil phase, Durosoft aids in creating formulations that are smooth, effective, and visually appealing.

High levels of oil + glycerine

Durosoft PG4L-SG contains high levels of oil + glycerine, renowned for their hydrating and moisturising properties. This combination ensures the skin retains moisture, providing long-lasting hydration and leaving it feeling soft and supple. Products formulated with Durosoft offer significant benefits for maintaining healthy, hydrated skin.

Made from Palm Kernel Oil

Durosoft PG4L-SG is derived from palm kernel oil, which is known for moisturising the skin. This natural oil helps maintain the skin's moisture balance, preventing dryness and keeping the skin feeling soft and smooth. Palm kernel oil can also strengthen the skin's microbiome, supporting overall skin health and resilience.

Low Surface Tension

One of Durosoft PG4L-SG's stand out benefits is its low surface tension, which allows for better dispersion of active ingredients and improved spreadability. This means that products glide more easily over the skin, providing a more pleasant application experience and ensuring that active ingredients are evenly distributed, maximising their efficacy.

Tetraglycerol Chain

Durosoft PG4L-SG features a tetraglycerol chain, which enhances its moisturising and mildness properties. This unique structure ensures that products formulated with Durosoft PG4L-SG are gentle on the skin, making them suitable for sensitive skin types.

The moisturising properties provide long-lasting hydration, improving personal care products overall effectiveness and appeal.

Diverse Fatty Acid Content

The diverse fatty acid content in Durosoft PG4L-SG contributes to forming stable micro-structures within formulations. This diversity helps create robust and resilient formulations that maintain their structure and effectiveness under various conditions. Stable micro-structures are vital to ensuring the longevity and performance of the final product.

Delivery Enhancer

Durosoft PG4L-SG acts as a delivery enhancer, improving the delivery of active ingredients into the skin. This ensures that the beneficial ingredients in your formulations are effectively absorbed, maximising their impact and efficacy. Products formulated with Durosoft can offer enhanced performance benefits for the end user.

RSPO-SG

Durosoft PG4L-SG is certified by the Roundtable on Sustainable Palm Oil (RSPO) with a Segregated (SG) supply chain model. This certification ensures that the palm oil used in Durosoft PG4L-SG is sustainably sourced, supporting ethical and environmentally responsible practices. By choosing Durosoft PG4L-SG, you align your brand with the values of sustainability and transparency, meeting consumer demand for ethically produced products.