PROTACHEM ISL [TM]

INCI Name: Isostearyl Linoleate

Protachem ISL (Isostearyl Linoleate) is a medium viscosity plant derived ester with bifunctional properties (emolliency and moisturization).

It is an unusual emollient that combines the non-occlusive lubricity of a branched chain monoester with the full-bodied non-oily characteristics of a fatty acid ester.

Protachem ISL is derived from isostearyl alcohol and linoleic acid. Linoleic acid is required for maintenance of cutaneous barrier function. In insufficient amounts, skin becomes scaly, exhibits hyperproliferation and increased transepidermal water loss (TEWL).

Protachem ISL supplies this essential fatty acid to the skin which assists in repairing the Intercellular Moisture Barrier increasing the intrinsic moisturization of skin and reducing TEWL.

Protachem ISL has excellent pigment dispersing properties and may be used in various types of make-up, lip gloss, lipstick, mascara and blush formulations. It is highly recommended in creams or lotions where it can partially or totally replace mineral or plant oils that tend to be oily or greasy.

In sunscreen products, it can solubilize oil soluble sunscreen actives and helps to reduce the oiliness often associated with these products and provide a non-greasy emollient feel to skin while improving the water-resistant properties of the product.

PROVEN MOISTURIZATION PROPERTIES*

APPEARANCE @25°C:	**CLEAR LIQUID**
COLOR (GARDNER):	**6 MAX.**
% WATER:	**0.5 MAX.**
ACID VALUE	**3 MAX.**
SAPONIFICATION VALUE:	**95-115**
IODINE VALUE (HANUS):	**60-80**

*** efficacy data available**

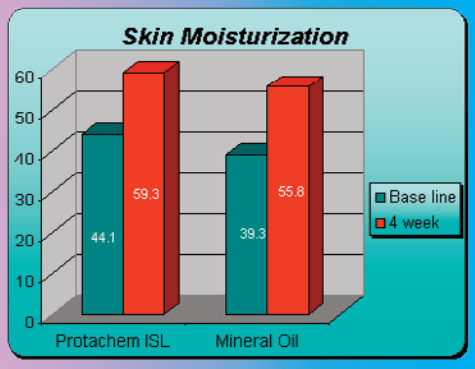
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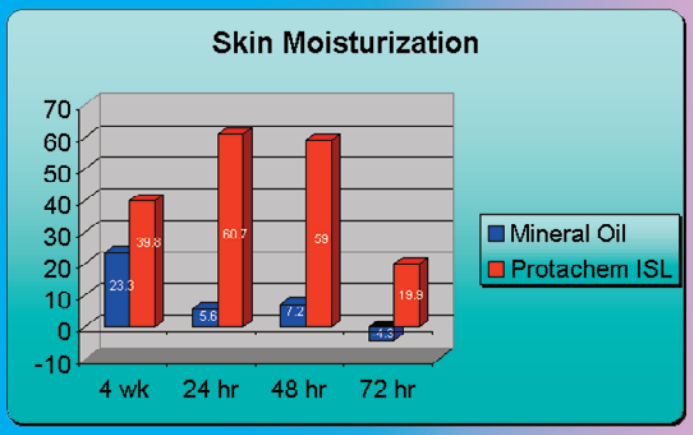
PROTACHEM ISL EFFICACY DATA

Protachem ISL (Isostearyl Linoleate) is a medium viscosity plant derived ester with bifunctional properties (emolliency and moisturization). It is an unusual emollient that combines the non-occlusive lubricity of a branched chain monoester with the full-bodied non-oily characteristics of a fatty acid ester. It has unique skin absorbency properties and reduces the greasy, oily feel of mineral and plant oils while enhancing rub-in and film forming properties.

A simple lotion, consisting of Deionized Water, 10% Protachem ISL, Protamer PE-2*, Polysorbate 80 and preservative, was compared to a similar lotion containing 10% Mineral Oil for moisturization performance by measuring Transepidermal Water Loss (TEWL) and Skin impedance with a Corneometer.

The protocol was designed as a 4-week half-face study in which, after a 1-week wash out period, the panelists applied each product to half their face and the corresponding forearm twice daily for a period of 4 weeks. After the 4-week use period Corneometer readings were taken on the face and TEWL was measured on the forearm of each panelist. These readings were compared to base line readings taken after the washout period. Protachem ISL improved skin moisturization by approximately 34% and reduced TEWL by approximately 19% from base line.





Following the 4-week readings all product usage was discontinued and TEWL and Corneometer readings were continued at 24 hr, 48 hr and 72 hr. As chart 2 shows the moisturization properties of mineral oil diminished immediately after the product use was discontinued. In fact after 72 hrs the skin treated with mineral oil was worse then base line. The skin treated with Protachem ISL showed significant increases in moisturization for the 72 hr time span. This proves that the Protachem ISL is absorbed into the Stratum Corneum and fortifies the intracellular lipid structure of healthy skin. In addition to the superior moisturization properties

Protachem ISL has excellent pigment dispersing properties and may be used in various types of make-up, lip gloss or lipstick, mascara formulations.

It is highly recommended in creams or lotions where it can partially or totally replace mineral or plant oils that tend to be oily or greasy. In sunscreen products, it can solubilize oil soluble sunscreen actives and helps to reduce the oiliness often associated with these products and provide a non-greasy emollient feel to skin while improving the water-resistant properties of the product.

Protachem ISL can be used in hair conditioning products to impart shine and softness and to help repair dry damaged hair.