



Guardian Laboratories

a division of UNITED-GUARDIAN, INC.

LUBRASIL™ DS

patented microemulsion

Description:

Silicone oils are extremely important in today's cosmetic formulations. They lend an excellent velvety smooth feel to creams and lotions, hair care products, makeup and powders. Lubrajel is also an extremely important component of the same, lending rheology modification, lubrication and moisture balancing. Combining these two materials would result in a superior product possessing the desirable properties of each, complementing each other in an elegant manner. This, however, is not easily accomplished, since Lubrajel® and silicones are not generally compatible. Although silicone oils may be emulsified into Lubrajel, this takes away from the clarity and colorlessness of the product.

After researching and experimenting with hundreds of potential systems, finally a successful product evolved. Lubrasil DS is the unique patented merger of silicone oil (dimethicone) and Lubrajel [glyceryl polymethacrylate (GPM)] in which the silicone oil is microemulsified using high energy to form the complex.

Lubrasil DS maintains the characteristics of Lubrajel, including the clarity, lubrication, moisture balancing and viscosification. The characteristics of the dimethicone enhance the Lubrajel by virtually eliminating the "tackiness" associated with formulations employing large concentrations of the material, and it leaves an even softer feel.

Upon application to the skin or hair, the GPM/water/dimethicone complex equilibrium is shifted, thereby releasing moisture and silicone. The silicone layer floats on the micro-thin layer of GPM, facilitating moisturization by altering the kinetics of the moisture flux or transepidermal water loss (TEWL).

Uses:

Lubrasil DS is compatible to varying degrees with nonionic surfactants, some anionic surfactants, and most water-soluble or dispersible materials that are not highly ionized. For assistance, in determining compatibility with a particular substance, contact the Technical Service Department. A sample formulary is available upon request.

Nomenclature:

CAS: 146126-21-8, 541-02-6, 58205-96-2, 556-67-2, 9005-65-6, 8051-52-3, 31692-79-2, 9002-92-0

INCI: Glyceryl Polymethacrylate, Cyclopentasiloxane, PEG-40 Sorbitan Diisostearate, Cyclotetrasiloxane, Polysorbate 81, PEG-15 Cocamine, Dimethiconol, Laureth-9

EINECS: NA, 208-764-9, N/A, N/A, N/A, N/A, N/A, 221-284-4

Typical Properties:

These Values are typical properties only and not necessarily specifications. Specifications and test methods are available upon request.

Form	Viscous Gel
Color	Colorless to pale yellow
Appearance @ 20-25°C	Clear
pH (neat) @ 20-25 °C	5.0-6.0
Viscosity, @ 20-25°C (Brookfield DV-II, spindle 7, 50 rpm)	34,000 cps
Refractive Index @ 20-24°C	1.4047

Testing:

Lubrasil DS was submitted for Repeated Insult Patch Testing on humans. Lubrasil DS did not cause skin irritation or induced allergic contact dermatitis.

Derivation:

No animal derived ingredients are used in the manufacture of Lubrasil DS. All raw materials in Lubrasil DS are of synthetic or vegetable origin.

Storage and Handling:

Lubrasil DS is a very slippery material and appropriate care should be taken during its handling. Avoid contact with strong acids, alkalis or oxidizing agents.

Avoid exposure to x-rays.

Availability:

Lubrasil DS is available in 45-pound pails and 500-pound drums.

Contact Guardian Laboratories for information about samples or sales.

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