



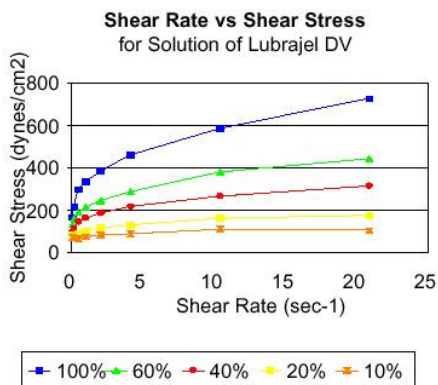
Lubrajel® DV

Description:

Lubrajel DV is the most viscous of all grades of Lubrajel. It is employed in a variety of personal care products where rheology as well as moisturization and feel are important; rheology being of primary concern. Lubrajel DV, because of its high yield value, is especially suitable for emulsion stabilization and suspension of compatible materials such as titanium dioxide, relatively unionized pigments, micas and pearlescent pigments, and cholesterol esters (liquid crystals).

Despite its high viscosity and yield value, diaphragm pumps and other positive displacement pumps easily pump Lubrajel DV. Its pseudoplastic nature and high yield value results in a product that behaves as a solid when low shear rates are applied and as a liquid when the shear rate is increased.

This graph exhibits the rheology of Lubrajel DV as well as several different dilutions in water.



Uses:

Lubrajel DV may be used at concentration ranging from as low as 7% to as high as 50% depending on the formulation requirements. Most often, Lubrajel DV is employed at 10-25% in creams, lotions, sunscreens and clear cosmetic gels. A sample formulary is available upon request.

Nomenclature:

CAS: 56-81-5, 9003-01-4, 57-55-6
INCI: Glycerin and Glyceryl Acrylate/Acrylic Acid Copolymer and Propylene Glycol
EINECS (Europe): 200-289-5, 201-177-9, 200-338-0
DSL/NDSL (Canada): 1650, 8957, 1675,
ENCS (Japan): JP 001341, JCIC 108622, JSCI 002328
AICS (Australia): All components comply

Contact Guardian Laboratories for information about samples or sales.

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
Clarity	Clear
pH (20 – 25 °C, as is)	5.2
Viscosity as is (20 – 25 °C) (Brookfield DV-II, spindle 7, 1 rpm)	1,000,000 cps
Viscosity 20% sol'n (20 – 25 °C) (Brookfield DV-II, spindle 6, 2.5 rpm)	120,000 cps
Refractive Index	1.390
% Methylparaben	0.12
% Propylparaben	0.03

Testing:

Lubrajel DV is characterized as having an excellent toxicological profile. Based on testing of a chemically similar product (Lubrajel CG), it should have an oral LD 50 greater than 5 grams per kilogram, is not irritating to the skin or eyes, and is not a sensitizer. A summary of safety tests performed using Lubrajel CG is available upon request.

Derivation:

United Guardian does not use animal derived ingredients in the manufacture of Lubrajel DV. All raw materials used in Lubrajel DV are of synthetic or vegetable origin.

Storage and Handling:

Lubrajel DV is very slippery and appropriate care should be taken during handling. Avoid contact with strong acids, alkalis or oxidizing agents.

Avoid exposure to x-rays.

Availability:

Lubrajel DV is available in 45-pound pails and 500 pound drums.