




SOFTISAN[®] Gel

INCI: Bis-Diglyceryl Polyacyladipate-1,
Propylene Glycol Dicaprylate/Dicaprate,
Stearalkonium Hectorite, Propylene Carbonate

-  Excellent co-emulsifier
-  Stability improver
-  Consistency regulator

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1. Description:

SOFTISAN® Gel is an oleogel consisting of an oil component and an inorganic gel-former. The oil component is an ester from natural fatty acids, hydroxystearic acid, isostearic acid and adipic acid with diglycerin and propylene glycol. The gel-former is an organically-modified bentonite. SOFTISAN® Gel is a cream-colored, odorless and tasteless, pasty substance with a glossy appearance.

2. Chemical and Physical Properties:

| Tests | Value | Unit |
|----------------------|-----------|----------|
| Acid value | max. 1,0 | mg KOH/g |
| Ash | 7 - 10 | % |
| Water | max. 0,50 | % |
| Toxic heavy metals* | max. 10 | ppm |
| Micropenetration* | 200 - 270 | |
| Propylene carbonate* | 3 – 5 | % |

* not included in certificate of analysis

3. Application:

SOFTISAN® Gel is miscible with oils, fats, waxes, and W/O emulsifiers. SOFTISAN® Gel is chemically neutral, stable against oxidation, and can be easily stored without rancidity problems.

SOFTISAN® Gel has a high water-binding capacity (> 25 %) and it is an excellent co-emulsifier. In some W/O formulations the use of an additional emulsifier may not be necessary.

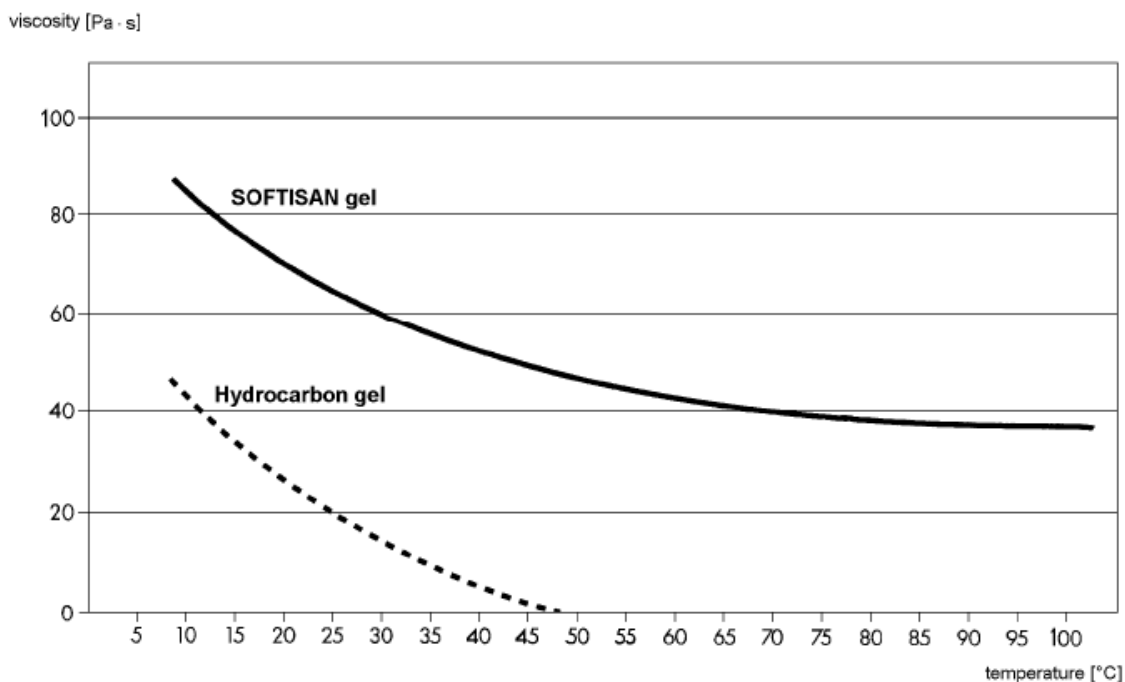
SOFTISAN® Gel is multifunctional, therefore the number of components necessary in formulations can be reduced.

The consistency of SOFTISAN® Gel, compared to hydrocarbon gels, is constant over a wide temperature range. It is extremely heat-resistant and does not even melt at temperatures of about 100° C (see Figure 1).

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Figure 1
Viscosity as a function of temperature



Because of its exceptional thermal stability (W/O emulsions with SOFTISAN® Gel do not undergo separation when heated up briefly to approx. 90° C) and water-binding capacity, SOFTISAN® Gel is especially suitable for use as:

- 🌿 Oil phases of W/O creams that require resistance to temperature stress (e.g. UV-protection creams).
- 🌿 A consistency regulator for waterless and aqueous cosmetics (e.g. makeup's, lip-glosses).
- 🌿 A stabilizing agent for the oil phase of an emulsion.

Since the very stable SOFTISAN® Gel cannot be melted, other lipids and emulsifiers have to be dispersed in the gel homogeneously at approx. 70 – 80° C. The aqueous phase is heated up to the same temperature and emulsified, using high-speed agitators, and simultaneously or afterwards homogenized. In many cases cold emulsification is possible.

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Cosmetic Functions:

SOFTISAN® Gel is very skin friendly because it does not inhibit natural respiration.

SOFTISAN® Gel contains MIGLYOL® 840 and organophilic gelformer. The MIGLYOL® 840 has a good spreadability and the gelformer have lamellar structures; therefore SOFTISAN® Gel can be readily deposited on the skin. Thus SOFTISAN® Gel leaves a velvet and smooth skin feeling without a greasy after feel.

Its water-resistant effect is retained in W/O formulations.

Thus SOFTISAN® Gel use is suggested for:

-  Color cosmetics
-  Sun care
-  Skin care

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4. Formulation Guide

| Baby Diaper Cream Zinc Oxide, Typ W/O | | 538 |
|--|--|------------|
| Phase A | | |
| SOFTISAN® GEL ¹ | Bis-Diglyceryl Polyacyladipate-1, Propylene Glycol Dicaprylate/Dicaprate, Stearalkonium Hectorite, Propylene Carbonate | 10,00 |
| SOFTISAN® 649 ¹ | Bis-Diglyceryl Polyacyladipate-2 | 3,00 |
| SOFTISAN® 142 ¹ | Hydrogenated Coco-Glycerides | 4,00 |
| MIGLYOL® 840 ¹ | Propylene Glycol Dicaprylate/Dicaprate | 6,00 |
| IMWITOR® 600 ¹ | Polyglyceryl-3 Polyricinoleate | 2,50 |
| Span 80 V ² | Sorbitan Monooleate | 2,00 |
| Calendula Oil | Calendula Officialis Flower Oil | 3,00 |
| CremerVERO Shea Butter ¹ | Butyrospermum Parkii | 3,00 |
| Phase B | | |
| d-Panthenol USP | Panthenol | 3,00 |
| Allantoin | Allantoin | 0,20 |
| CremerGLYC ¹ | Glycerine | 3,00 |
| Magnesiumsulfat 7 H ₂ O | Magnesium Sulfate | 1,50 |
| Preservatives | | q.s. |
| Demin. Aqua | Aqua | ad 100,00 |
| Phase C | | |
| Zincoxide | | 15,00 |
| Titan dioxide | | 5,00 |
| Tocopherol | | 0,50 |

Procedure:

1. Heat Phase A and B separately to approx. 80 °C. Homogenize Phase A.
2. Add Phase B to Phase A. Homogenize.
3. Cool with gentle stirring to approx. 40 °C.
4. Add Phase C in small amounts. Homogenize.
5. Cool with gentle stirring to approx. 30 °C.


Supplier References:




¹Cremer Care

²Croda

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 bucket with 25 kg

-  Store below 25° C
-  Protect from light and moisture
-  Shelf life 3 years

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