




MIGLYOL® Gel B, Gel T, 840 Gel B

INCI:

Gel B: Caprylic/Capric Triglyceride, Stearalkonium Hectorite,
Propylene Carbonate

Gel T: Caprylic/Capric Triglyceride, Stearalkonium Bentonite,
Propylene Carbonate

840 Gel B: Propylene Glycol Dicaprylate/Dicaprate, Stearalkonium
Hectorite, Propylene Carbonate

-  Heat stable emulsions
-  Consistency regulators
-  Non-oily, soft and velvet skin feeling

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1. Description:

MIGLYOL® Gels are heat-stable oleo gels for cosmetics. They are prepared by jellifying MIGLYOL® neutral oils with inorganic gelling agents.

MIGLYOL® Gel B, MIGLYOL Gel T comprise of plant derived fatty acids and glycerol (from coconut and palm kernel oil) caprylic/capric triglyceride (MIGLYOL®812, Ph.Eur., organically modified bentonite and propylene carbonate (USP*), acting as gelling agent.

MIGLYOL® 840 Gel B consists of synthetic propylene glycol dicaprylate/dicaprate, organically-modified bentonite and propylene carbonate as gelling agent. They have a soft, pasty consistency similar to petrolatum.

The B grades have a fleshy color, the T grade has a slightly greenish color.

MIGLYOL® Gels are chemically neutral, oxidation-resistant and have a long shelf life. Rancidity problems do not occur because only saturated fatty acids are present.

2. Chemical and Physical Properties:

Tests	Value			Unit
	Gel B	Gel T	840 Gel B	
Acid value	max. 0.5	max. 0.5	max. 0.5	mg KOH/g
Ash	7.0 – 10.0	7.0 – 10.0	7.0 - 10.0	%
Water	max. 0.5	max. 0.5	max. 0.5	%
Heavy metals *	max. 20	max. 20	max. 20	ppm
Micropenetration at 20 °C *	120 - 190	190 - 280	135 - 190	
Propylene Carbonate *	3 - 5	3 - 5	3 - 5	%

*not included in Certificate of Analysis

3. Application:

MIGLYOL® Gels are miscible with all oils, fats, waxes and W/O emulsifiers (see Formulation Guide).

MIGLYOL® Gels are insoluble in water and are soluble in ethyl alcohol, acetone and diethyl ether, whereby a solid residue of bentonite remains.

The preparation of stable water-in-oil-emulsions of different consistency is possible with the MIGLYOL® Gels, using very few ingredients. Complicated formulations can be simplified substantially.

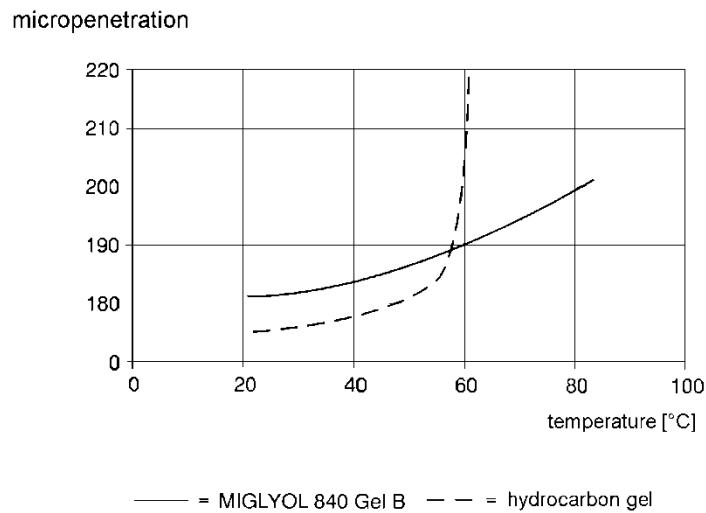
MIGLYOL® Gels are extremely heat-stable and do not melt, even at temperatures of 100°C (see Fig. 1).

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Fig. 1 – Micropenetration

Fig. 1
micropenetration as a
function of temperature







That is why additional fats, oils, waxes or paraffin hydrocarbons and emulsifiers being used in the formulations must be dispersed in the gels homogeneously at 70 - 80°C. The aqueous phase is then heated up to the same temperature and emulsified using hi-speed agitators and should simultaneously or afterwards being homogenized.

MIGLYOL® Gels promote the thermostability of sticks and other solid/liquid preparations. Because of their high thermal stability MIGLYOL® Gels are recommended for use as consistency regulators in cosmetic and pharmaceutical preparations where it is important to maintain viscosity over a wide temperature range (e.g. UV protection creams). W/O emulsions with MIGLYOL® Gels do not show phase separation even after short heating up to 90°C.

Cosmetic Functions:

MIGLYOL® Gels are very compatible with the skin because they do not inhibit the skin respiration. Because of its spreadability and the lamellate structure of the organophilic gel former, MIGLYOL® Gels can easily be spread on the skin. The skin becomes soft and velvety, without a greasy after-feel.

Thus MIGLYOL® Gels use is suggested for:

-  Body care
-  Color cosmetics
-  Skin care
-  Sun care

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4. Formulation Guide:

W/O cream, Basic Formulation		450
Phase A		
MIGLYOL® Gel B¹	Caprylic/Capric Triglyceride, Stearalkonium Hectorite, Propylene Carbonate	20,00
MIGLYOL® 812 N¹	Caprylic/Capric Triglyceride	14,00
IMWITOR® 600¹	Polyglyceryl-3 Polyricinoleate	4,00
Span 80 V ²	Sorbitan Monoleate	1,00
SOFTISAN® 142¹	Hydrogenated Coco-Glycerides	1,50
SOFTISAN® 378¹	Caprylic/Capric/Myristic/Stearic Triglyceride	4,00
Bees Wax	Cera Alba	3,00
Phase B		
Magnesiumsulfat 7 H ₂ O	Magnesium Sulfate	1,50
CremerGLC¹	Glycerine	2,00
Preservative		q.s.
Demin. Aqua	Aqua	ad 100,00

Procedure:

1. Phase A and B is heated up separately to approx. 75-80°C and then phase A is homogenized.
2. Add phase B into A with high-speed stirring, homogenize.
3. Cool with gentle stirring down to approx. 40°C. Homogenize at lowest speed for a short time.
4. Cool down to approx. 25°C with gentle stirring.

Supplier References:

¹Cremer Care

²Croda International

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W/O Lotion, cold processed		424
Phase A		
MIGLYOL® Gel T ¹	Caprylic/Capric Triglyceride, Stearalkonium Bentonite, Propylene Carbonate	10,00
MIGLYOL® 812 N ¹	Caprylic/Capric Triglyceride	7,00
MIGLYOL® 829 ¹	Caprylic/Capric/Succinic Triglyceride	4,00
IMWITOR® 600 ¹	Polyglyceryl-3 Polyricinoleate	3,00
Span 80 V ²	Sorbitan Monoleate	1,00
Mineral Oil	Parafinum Liquidum	8,00
Olive Oil	Olea Europea	5,00
Antioxidant		q.s.
Phase B		
Magnesiumsulfat 7 H ₂ O	Magnesium Sulfate	1,20
Preservative		q.s.
Demin. Aqua	Aqua	ad 100,00
Phase C		
Fragrance	Fragrance	q.s.

Procedure:

1. This formulation can be prepared at room temperature.
Mix components of phase A and B separately.
2. Homogenize phase A, then stir phase B with small amounts into phase A and homogenize until an evenly distribution of small particle size.
3. Add C.


Supplier References:




¹Cremer Care

²Croda International

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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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