IOI OLEOCHEMICAL

IOI Oleo GmbH
PHARMA

Technical Data Sheet | MIGLYOL® 840

Ph. Eur. name: Propylene Glycol Dicaprylocaprate
USP name: Propylene Glycol Dicaprylate/Dicaprate

1. Description

MIGLYOL 840 is an ester of saturated coconut/palmkernel oil-derived caprylic and capric fatty acids and propylene glycol.

2. Chemical and Physical Properties

Tests	Values	Typical values	Units	Methods
Acid value	max. 0.2	0.03	mg KOH/g	Ph. Eur. 2.5.1
Hydroxyl value	max. 10	1	mg KOH/g	Ph. Eur. 2.5.3
Water	max. 0.1	0.02	%	Ph.Eur. 2.5.12
Viscosity at 20 °C	9 – 12	10	mPa·s	Ph. Eur. 2.2.9
Colour	max. 50	14	APHA	ISO 6271
Caprylic acid ($C_{8:0}$)	50.0 – 80.0	69	%	Ph. Eur. 2.4.22
Capric acid ($C_{10:0}$)	20.0 – 50.0	31	%	Ph. Eur. 2.4.22

MIGLYOL 840 fully complies with the requirements of the current Ph. Eur. monograph "Propylene Glycol Dicaprylocaprate".

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3. Properties

MIGLYOL 840 is a propylene glycol diester of saturated plant fatty acids with chain lengths of C_8 and C_{10}. Therefore it has excellent emollient properties.
MIGLYOL 840 is a clear, virtually colourless liquid of neutral odour and taste.
MIGLYOL 840 is very pure because of its carefully selected raw materials. As a result of tightly controlled manufacturing process microorganisms are practically absent because of very low levels of water, i.e. microbials cannot sustain. It is free of additives such as antioxidants, solvents and catalyst residues.
The very low viscosity of MIGLYOL 840 makes it suitable as a carrier oil for s.c. injections in humans or s.c. injections in veterinary preparations.
MIGLYOL 840 has the following advantages compared to edible oils:
- very good solvent for drugs.
- low in impurities (as a result of production according to GMP)
- high stability against oxidation
- liquid at 0 °C.
- excellent spreadability on the skin due to the very low viscosity and good skin absorption.
- does not inhibit skin-respiration.
- excellent penetration-promoting, emollient and skin-smoothing properties.

Solubility
MIGLYOL 840 is soluble in hexane, toluene, diethyl ether, ethyl acetate, acetone, isopropanol and ethanol 96%.
MIGLYOL 840 is miscible in all ratios with natural oils.
MIGLYOL 840 is not soluble in water and glycerol.

4. Additional Information

Propylene glycol esters of edible fatty acids in food comply with CFR 21, § 172.856 and are classified as GRAS.

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5. Applications

Parenteral applications

i.m./s.c:	Carrier and solvent.

Topical theraputics

Psoriasis Treatment and Antiprucitics:	Readily absorbent, scale-detaching and keratin softening oil component, particularly in combination with Vitamin A.
Ointments:	Non-oxidizing, absorption-promoting, non-occlusive oil component with excellent spreadability.

6. Packaging Information

6.1. Material compatibility instructions

MIGLYOL 840 is a good solvent, like other low-viscosity hydrophilic ester oils. Some plastics, especially those containing plasticizers, tend to turn brittle or to expand. **Polystyrene and PVC are not suitable packaging materials**. Be careful when selecting resistant seal closure material (e.g. VITON® is recommended) and be careful of sufficient pull power because MIGLYOL 840 has a very high tendency to migrate.

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The following packaging materials are recommended:
- Low pressure polyethylene (High Density PE = HDPE)
- PTFE (PolyTetraFluorEthylene)
- PolyPropylene
- Metal (stainless steel)
- Glass

6.2. Packaging Units

HDPE IBC containers of 930 kg net, steel drums with an inner lacquer lining of 190 kg net.

7. Storage and Shelf Life

Longterm storage in original tightly closed containers, dry, protected from light and moisture and below 25°C the shelf life then is at least three years.