



IOI OLEOCHEMICAL

PERSONAL CARE

TECHNICAL DATA SHEET

IMWITOR® 600

INCI: Polyglyceryl-3 Polyricinoleate



NATURALLY SOFT EMULSIFIER, FOR A PERPETUAL CARESS

Nonionic plant-based liquid W/O emulsifier with pigment wetting properties, offering full softness & flexibility for formulators, from fluid to buttery textures



DESCRIPTION

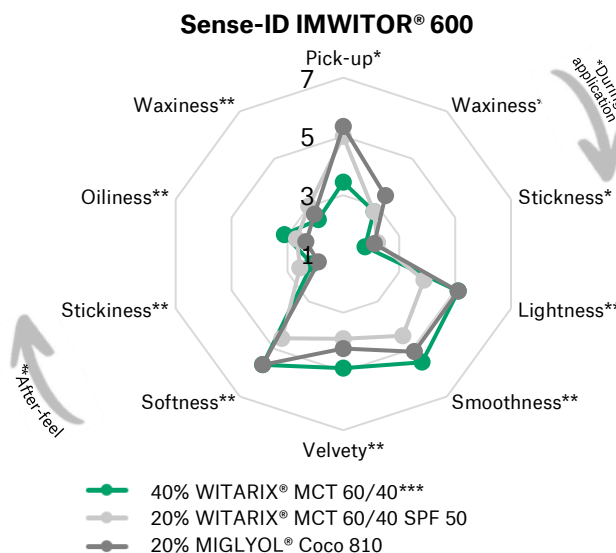
IMWITOR® 600 is the **W/O emulsifier** for **out-of-ordinary skin feel**. Safely used for decades in the **sweet world of chocolates** for its extraordinary power to **combine all components** in specific textures, this safe ingredient is a must-have from skin care to sun care or even color. From fluid to buttery, with broad compatibility and adaptability with oil or water phases and even pigment wetting, this 100% natural vegan W/O emulsifier will deliver the full flexibility every formulator is looking for!

Naturally soft – this is what describes the sensory of milks, lotions, creams or even buttery balms formulated with IMWITOR® 600 best!

Emulsion concepts based on this emulsifier offer an easy pick-up, uniform spreading & a **non-waxy, non-sticky** sensorial profile during application.

Softness is the most prominent property of the after-feel – regardless of oil content! In addition, formulas also feel

smooth and velvety, non-sticky, non-oily and non-waxy.



This liquid cold-processable, nonionic W/O emulsifier has a low HLB of 4. It is an ester from polyglycerol and plant-derived, condensed castor oil fatty acids. IMWITOR® 600 is a yellow to brownish liquid with honey-like consistency and has a characteristic odor.

APPLICATION

This plant-based emulsifier does not only offer a soft touch in all formulas, but also **full flexibility** to formulators! It allows for **low to high viscosity**, **compatibility** with all types of ingredients, and can handle both **low and high-water content**. Combined with its pigment wetting properties, IMWITOR® 600 is a **perfect fit** for all formulas from **premium to mass market**.

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|--|--|--|---|
| <input checked="" type="checkbox"/> Skin Care | <input checked="" type="checkbox"/> Body Care | <input checked="" type="checkbox"/> Sun Care | <input checked="" type="checkbox"/> Color Cosmetics |
| <input checked="" type="checkbox"/> Baby Care | <input checked="" type="checkbox"/> Hair Care | <input type="checkbox"/> Bath Care | <input type="checkbox"/> Wet Wipes |
| <input checked="" type="checkbox"/> Self-Tanning | <input checked="" type="checkbox"/> Beard Care | <input type="checkbox"/> Deodorants | <input type="checkbox"/> Intimate Hygiene |

IMWITOR® 600 is soluble in fatty and polar oils such as MCTs (e.g. WITARIX® MCT 60/40) and becomes slightly cloudy in mineral oil and cold ethanol.

*** All formulas shown are based on basic chassis formulas with 3% IMWITOR® 600 (SPF 50 formula tested with 2% IMWITOR® 600).



FORMULATION HINTS

- Recommended concentration of **IMWITOR® 600**:
 - Main emulsifier: 2 – 4%
 - Co-emulsifier: 0.5 – 2% for enhanced softness and spreadability
- Applicable for cold, hot and one-pot processes
 - Add the water phase in small portions to the oil phase under stirring or homogenizing; make sure that the water is properly incorporated
 - Avoid overhomogenization (detectable by e.g. strong and instant viscosity increase)
- Add IMWITOR® 600 to the oil phase
- IMWITOR® 600 **does not build viscosity on its own**, add a co-emulsifier, wax and increase the size of the water phase to obtain creamy, buttery or balmy textures
- Recommendations:
 - Combine IMWITOR® 600 with 1.2% (up to 2%) ZnSO₄ to stabilize the emulsifier system
 - Use glycerin or propylene glycol for elevated stability in the cold
 - Use 0.4% SOFTISAN® GC8 (Glyceryl Caprylate) for natural preservation if needed
 - Add a co-emulsifier like IMWITOR® PG3 DIS (Polyglyceryl-3 Diisostearate) or IMWITOR® GMIS (Glyceryl Isostearate) for even higher stability
 - Control heat stability by using waxes or metal soaps (e.g. Magnesium Stearate, Magnesium Sulfate or Aluminum Tristearate)
 - For cold processes, MIGLYOL® Gel B and MIGLYOL® Gel 840 B can be used as a stabilizer for the formulation
- For **oil phases** from
 - 20 – 40% (without wax)
 - **15 – 50%** (in combination with 1 – 4% wax, solid lipids (e.g. SOFTISAN® 100) or others)
- For **water phases up to 80%**
- IMWITOR® 600 is a multi-component mixture of mono-, di-, triglycerides and polyglycerol. All components have different physical properties which may cause turbidity and/ or cloudiness. Cloudiness of the product is a usual property and therefore has no influence on the quality. **Stirring or homogenizing IMWITOR® 600 in the sample/ hobbock/ drum before use is recommended.**



FORMULATION GUIDE

LIGHT²RICH TRANSFORMER LOTION NO. 812

IMWITOR® 600 in combination with the surfactant creates this skin sensation, resulting in a lotion transforming from light to rich feel. SOFTIGEN®PURA is a natural skin protector by decreasing the transepidermal water loss. MIGLYOL® T-C7 leads to a dry and non-oily skin feel. MIGLYOL® 8810 makes the skin silky and smooth. SOFTISAN® conditionHAIR gives moisture to the skin.

	Trade Name	INCI	%
PHASE A	IMWITOR® 600	Polyglyceryl-3 Polyricinoleate	4.0
	SOFTIGEN®PURA	Caprylic/Capric Triglyceride (and) Hydrogenated Rapeseed Oil	2.0
	MIGLYOL® T-C7	Triheptanoin	5.0
	MIGLYOL® 8810	Butylene Glycol Dicaprylate/Dicaprate	5.0
	SOFTISAN® conditionHAIR	PCA Glyceryl Oleate	0.3
	Shea Butter	Butyrospermum Parkii (Shea) Butter	2.0
	6607L Sunflower Seed Wax	Helianthus Annuus Seed Cera (and) Ascorbyl Palmitate (and) Tocopherol	0.8
	Nafol® 1618 H	Cetearyl Alcohol	2.5
PHASE B	Water demin.	Aqua	71.0
	Glycerin	Glycerin	4.0
	Keltrol® CG-SFT	Xanthan Gum	0.6
	euxyl® PE 9010	Phenoxyethanol (and) Ethylhexylglycerin	1.0
PHASE C	Plantapon® LGC Sorb	Sodium Lauryl Glucose Carboxylate (and) Lauryl Glucoside	1.5
	PHASE D 0798185 White Flair	Parfum (EU)/ Fragrance (US)	0.3

PREPARATION:

1. Mix phase B until Keltrol® is completely dissolved.
2. Add phase C to phase B under stirring.
3. Heat phases A and B/C to 80°C.
4. Add phase A to B/C and homogenize (3 min @ 5.000 - 8.000 rpm).
5. Cool down to 30 - 40°C while stirring.
6. Add phase D.

SUPPLIERS:

IOI Oleo: IMWITOR®, MIGLYOL®, SOFTIGEN®, SOFTISAN®
 KahlWax: Sunflower Seed Wax
 Sasol: Nafol®
 CP Kelco: Keltrol® Schülke & Mayr euxyl®
 BASF: Plantapon®
 Bell: Parfum



BALM-TO-OIL MOISTURISING CLEANSER NO. 811

The majority of skin cleansers are harsh; they remove all skin oils and leave your skin dry and tense. Our super mild but deep cleansing Balm-to-Oil Moisturizing Cleanser is different. Take some product out of the jar with your dry hands and massage it onto your face. Emulsify the product with lukewarm water. Now, let the magic happen. Rinse it off and enjoy clean and soft skin thanks to the great combination of our water-in-oil emulsifier IMWITOR® 600 and SOFTISAN® conditionHAIR, for that extra moisture boost. No more creams needed!

	Trade Name	INCI	%
PHASE A	WITARIX® MCT C8	Tricaprylin	12.0
	SOFTISAN® conditionHAIR	PCA Glyceryl Oleate	0.5
	MIGLYOL® T-C7	Triheptanoin	12.0
	MIGLYOL® 8810	Butylene Glycol Dicaprylate/Dicaprate	10.0
	SOFTIGEN®PURA	Caprylic/Capric Triglyceride (and)	10.0
		Hydrogenated Rapeseed Oil	
	IMWITOR® 600	Polyglyceryl-3 Polyricinoleate	2.4
	8104 Beeswax White	Cera Alba	14.0
	6692 Rose Wax	Rosa Damascena Flower Cera	2.0
	Plantacare® 2000 UP	Decyl Glucoside (and) Aqua	20.0
	Sunflower Oil	Helianthus Annuus (Sunflower) Seed Oil	16.6
Tocopherol	Tocopherol	0.5	

PREPARATION:

1. Heat phase A to 75°C.
2. Cool down to 45°C with stirring.
3. Fill in packaging and allow cooling down.

SUPPLIERS:

IOI Oleo: IMWITOR®, MIGLYOL®, SOFTIGEN®, SOFTISAN®, WITARIX®
 KahlWax: Beeswax, Rosewax
 BASF: Plantacare®

HANDLING AND SHELF LIFE

The shelf life for IMWITOR® 600 is at least thirty-six months if the product is stored below 25°C in a dry place in original, tightly closed containers, protected from light and moisture. Stirring or homogenizing IMWITOR® 600 is recommended before use.

PACKAGING UNITS

Hobbock with 25 kg; 600 kg on CP3 pallet
 Drum with 180 kg; 720 kg on CP3 pallet
 IBC with 950 kg

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Raw material approved by ECOCERT GREENLIFE, compliant with the COSMOS standard

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