# TEGOSOFT® OER

Enzymatically produced, vegetable-based ester

- Based on 100% vegetable ingredients
- Produced by the unique sustainable EVONIK enzymatic process
- High purity, very low color and consistent product quality
- Imparts a caring and smooth skin feel in cosmetic formulations
- Alternative or supplement to Jojoba Oil
- COSMOS and NATRUE certified

Personal Care

**INCI Name (PCPC Name)**

Oleyl Erucate

| Chemical and physical properties (not part of specifications) | |
|---|---|
| Form | Liquid |

| Further product information (not part of specifications) | |
|---|---|
| Density (g/cm³) | approx. 0.87 |
| Viscosity at 25 °C according to Höppler (mPas) | approx. 40 |
| Surface tension at 25 °C according to ring method (mN/m) | approx. 32 |
| Spreadability | medium spreading |
| Polarity | medium polarity |
| Cloud point (°C) | 19 |
| Peroxide number | <=5.0 mVAL $O_2$/kg |

**Properties**

- TEGOSOFT® OER is an emollient ester of oleyl alcohol and erucic acid of 100% vegetable origins.
- It is produced by the unique Evonik sustainable enzymatic process, which yields a high-purity product with very low color and consistent quality.
- It is a clear cosmetic ester oil with a structure and properties similar to natural Jojoba Oil.
- It is fully biodegradable
- It imparts a caring skin feel in cosmetic formulations like natural Jojoba Oil.
- It is miscible with common cosmetic oils.
- It is easy to formulate in combination with other oils into O/W and W/O systems.
- The color of TEGOSOFT® OER is substantially improved compared to the natural Jojoba oil (Figure1).

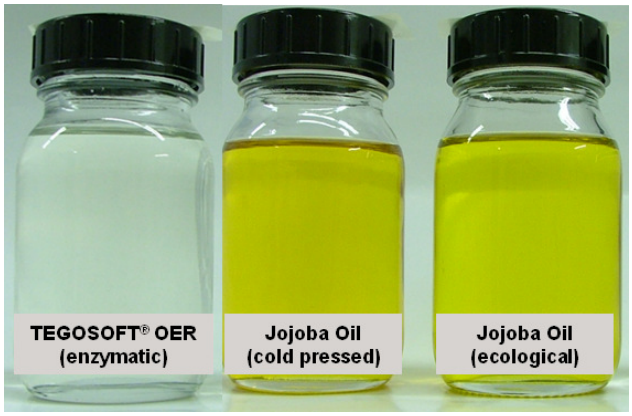


Figure 1. Product color
Left: TEGOSOFT® OER, enzymatically produced
Middle: Jojoba Oil, cold pressed
Right: Jojoba Oil, ecological

TEGOSOFT® OER has no noticeable impact on the appearance of formulations unlike natural Jojoba Oil. Skin care O/W emulsion formulation with 5% TEGOSOFT® OER appears brilliant white as compared to natural Jojoba Oil formulated at an equal level. Therefore, TEGOSOFT® OER is suitable for all cosmetic formulations, especially in color sensitive formulations.

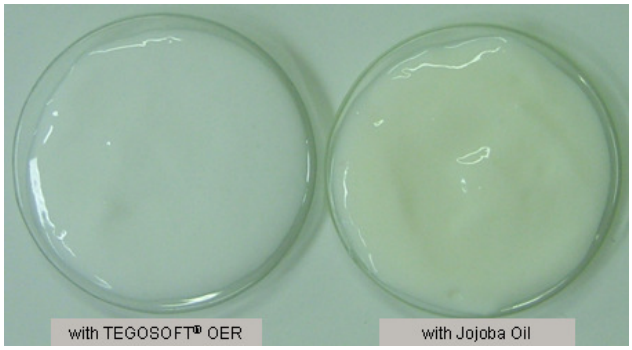


Figure 2. Visual appearance of product
Left: with 5% TEGOSOFT® OER;
Right: with 5% Jojoba Oil.

- The quality and supply of TEGOSOFT® OER are not subject to variations in seasonal conditions.
- The product is stabilized with tocopherol.

**Application**

- Skin care products
- Sun care products
- Color cosmetics and other personal care products

## Suggested usage concentration

1 - 10% TEGOSOFT® OER

## Packaging

720 kg pallet (4 x 180 kg drum)

## Storage

The product could become cloudy when stored at temperatures below its cloud point. But this does not affect the performance of the product. Heating will result in a clear product.

## Hazardous goods classification

Information concerning

- classification and labeling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

## Guideline Formulations

| **Lifting Face Cream MAC 763/2** | |
|---|---|
| **Phase A** | |
| TEGO® Care 450 (Polyglyceryl-3 Methylglucose Distearate) | 3.00% |
| TEGIN® M Pellets (Glyceryl Stearate) | 2.00% |
| TEGO® Alkanol 18 (Stearyl Alcohol) | 1.00% |
| TEGOSOFT® OER | 4.00% |
| TEGOSOFT® CT (Caprylic/Capric Triglyceride) | 6.00% |
| TEGOSOFT® M (Isopropyl Myristate) | 9.00% |
| SPHINGOKINE® NP (Caprooyl Phytosphingosine) | 0.05% |
| **Phase B** | |
| Glycerin | 3.00% |
| Water | 71.95% |
| **Phase Z** | |
| Preservative, perfume | q.s. |

**Preparation:**

1. Heat phase A and B separately to approx. 70 – 75 °C.
2. Add phase A to phase B with stirring[1)].
3. Homogenize.
4. Cool with gentle stirring.

[1)] Important:
If phase A has to be charged into the vessel first, phase B must be added **without stirring**.

| **Rejuvenating O/W Cream<br>WR 3/09-9** | |
|---|---|
| **Phase A** | |
| AXOL® C 62 Pellets<br>(Glyceryl Stearate Citrate) | 2.00% |
| TEGO® Alkanol 1618<br>(Cetearyl Alcohol) | 6.00% |
| TEGOSOFT® CT<br>(Caprylic/Capric Triglyceride) | 12.50% |
| TEGOSOFT® DEC<br>(Diethylhexyl Carbonate) | 1.00% |
| TEGOSOFT® OER | 3.00 % |
| Xanthan Gum<br>(Keltrol CG-SFT, CP Kelco) | 0.50% |
| **Phase B** | |
| Glycerin | 3.00% |
| HyaCare® 50<br>(Hydrolyzed Hyaluronic Acid) | 0.10% |
| Water | 71.90 % |
| **Phase C** | |
| Preservative, perfume | q. s. |

**Preparation:**

1. Heat phase A and B separately to approx. 70 – 75 °C.
2. Add phase A to phase B with stirring[1)].
3. Homogenize.
4. Cool with gentle stirring.
5. Add phase C below 40 °C.

[1)] Important:
If phase A has to be charged into the vessel first, phase B must be added **without stirring**.

| **Natural Wellness Body Lotion<br>F 11/10-16** | |
|---|---|
| **Phase A** | |
| TEGO® Care PSC 3<br>(Polyglyceryl-3 Dicitrate/Stearate) | 3.00% |
| TEGOSOFT® CT<br>(Caprylic/Capric Triglyceride) | 4.00% |
| TEGOSOFT® OER | 3.00% |
| Prunus Amygdalus Dulcis (Sweet Almond) Oil | 5.00% |
| **Phase B** | |
| Water | 80.50% |
| Glycerin | 3.00% |
| **Phase C** | |
| Xanthan Gum<br>(Keltrol CG-SFT, CP Kelco) | 0.50% |
| **Phase D** | |
| Sodium Hydroxide (10% in water) | 0.20% |
| **Phase E** | |
| Benzyl Alcohol; Glycerin; Benzoic Acid; Sorbic Acid<br>(Rokonsal BSB-N, ISP) | 0.80% |
| **Phase Z** | |
| Perfume | q. s. |

**Preparation:**

1. Heat phase A and B separately to 70 – 75 °C.
2. Add phase A to phase B with stirring[1)].
3. Homogenize.
4. Cool with gentle stirring.
5. Add phase C at 40 °C.
6. Homogenize for a short time.
7. Add phase D.
8. Add phase E and adjust final pH of emulsion to 5.0 – 5.5.

[1)] Important:
If phase A has to be charged into the vessel first, phase B must be added **without stirring**.

| **Caring O/W Body Lotion<br>WR 3/09-17a** | |
|---|---|
| **Phase A** | |
| TEGIN® 4100 Pellets<br>(Glyceryl Stearate) | 1.00% |
| Stearic Acid | 1.00% |
| TEGOSOFT® P<br>(Isopropyl Palmitate) | 2.00% |
| TEGOSOFT® CT<br>(Caprylic/Capric Triglyceride) | 8.00% |
| TEGOSOFT® CR<br>(Cetyl Ricinoleate) | 1.00% |
| TEGOSOFT® OER | 2.00% |
| **Phase B** | |
| TEGO® Care CG 90<br>(Cetearyl Glucoside) | 1.50% |
| Glycerin | 3.00% |
| HyaCare® 50<br>(Hydrolyzed Hyaluronic Acid) | 0.10% |
| Water | 78.80% |
| **Phase C** | |
| TEGO® Carbomer 141<br>(Carbomer) | 0.20% |
| TEGOSOFT® P<br>(Isopropyl Palmitate) | 0.80% |
| **Phase D** | |
| Sodium Hydroxide (10% in water) | 0.60% |
| **Phase E** | |
| Preservative, perfume | q. s. |

**Preparation:**

1. Heat phase A and B separately to approx. 80 °C.
2. Add phase A to phase B with stirring[1)].
3. Homogenize.
4. Cool with gentle stirring to approx. 60 °C and add phase C.
5. Homogenize for a short time.
6. Cool with gentle stirring and add phase D/E below 40 °C.

[1)] Important:
If phase A has to be charged into the vessel first, phase B must be added **without stirring**.

| **Natural W/O Cream<br>H 19/09-4** | |
|---|---|
| **Phase A** | |
| ISOLAN® PDI<br>(Diisostearoyl Polyglyceryl-3 Dimer Dilinoleate) | 3.00% |
| TEGOSOFT® CT (Caprylic/Capric Triglyceride) | 5.00% |
| TEGOSOFT® TIS (Triisostearin) | 4.00% |
| TEGOSOFT® P (Isopropyl Palmitate) | 3.00% |
| TEGOSOFT® OER | 2.00% |
| Beeswax | 0.60% |
| Hydrogenated Castor Oil | 0.40% |
| Prunus Amygdalus Dulcis Oil | 5.00% |
| Ceramide III (Ceramide NP) | 0.10% |
| **Phase B** | |
| Water | 70.40% |
| Glycerin | 5.00% |
| Magnesium Sulfate Heptahydrate | 1.00% |
| Sodium Benzoate, Potassium Sorbate, Aqua (EUXYL K 712, Schuelke & Mayr) | 0.50% |
| Citric Acid (10% in water) | q.s. |
| **Phase Z** | |
| Perfume | q.s. |

**Preparation:**

1. Heat phase A to approx. 80 °C.
2. Adjust the pH value of phase B to approx. 5.0 – 5.5. Add phase B (80 °C or room temperature) slowly while stirring.
3. Homogenize for a short time.
4. Cool with gentle stirring below 30 °C and homogenize again.

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