Technical Information

TEGO® Care SE 121

Natural emulsifier and co-emulsifier for O/W emulsions

Intended use

O/W emulsifier for skin care

Benefits at a glance

- PEG-free, fully based on natural renewable raw materials
- Recommended usage concentration of 2 – 5%
- Co-emulsifier for O/W creams and lotions

INCI (PCPC name)

Sucrose Stearate

Chemical and physical properties (not part of specifications)

Form	pellets/pellet conglomerates*
HLB value	approx. 13

*Note: conglomerates can occur due to filling temperature and packaging pressure.

Main properties

- TEGO® Care SE 121 is produced from natural renewable raw materials.
- TEGO® Care SE 121 is a mild, PEG-free co-emulsifier for O/W creams and lotions.
- Due to its chemical composition as a sucrose ester TEGO® Care SE 121 has moisturizing properties.
- TEGO® Care SE 121 does not contain any solvent or preservative.

Preparation

It is suggested to add TEGO® Care SE 121 to the water phase. It is also possible to add TEGO® Care SE 121 to the oil phase.

Further manufacturing conditions correspond to the principles of common processing for O/W emulsions.

Application

TEGO® Care SE 121 is especially suitable for O/W creams and lotions for

- Facial and body care
- After sun are
- Baby care

Recommended usage concentration

2.0 – 5.0% TEGO® Care SE 121

Packaging

450 kg pallet (18 x 25 kg bag)

Hazardous goods classification

Information concerning

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

is given in our material safety data sheets.

Guideline formulations

O/W Moisturizing Body Lotion SZ 37/14-3	
Phase A	
TEGIN® 4100 Pellets (Glyceryl Stearate)	0.50%
Stearic Acid	0.50%
TEGOSOFT® MM (Myristyl Myristate)	1.00%
TEGOSOFT® APM (PPG-3 Myristyl Ether)	3.00%
TEGOSOFT® OP (Ethylhexyl Palmitate)	4.20%
Cyclopentasiloxane	5.00%
Tocopheryl Acetate	0.50%
ABIL® 350 (Dimethicone)	0.30%
Phase B	
TEGO® Care CG 90 (Cetearyl Glucoside)	1.00%
TEGO® Care SE 121	2.00%
Allantoin	0.20%
Panthenol	0.50%
Glycerin	3.00%
Water	76.70%
Phase C	
TEGO® Carbomer 141 (Carbomer)	0.20%
TEGOSOFT® OP (Ethylhexyl Palmitate)	0.80%
Phase D	
Sodium Hydroxide (10% in water)	0.60%
Phase Z	
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 below 40 °C.

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

*Formulation was tested with 1.0% Phenoxyethanol; Ethylhexylglycerin (Euxyl PE 9010, Schülke & Mayr GmbH)

Facial Mask SZ 37/14-5	
Phase A	
ABIL® Care 85 (Bis-PEG/PPG-16/16 PEG/PPG-16/16 Dimethicone; Caprylic/Capric Triglyceride)	1.50%
TEGINACID® C (Ceteareth-25)	1.00%
TEGIN® M Pellets (Glyceryl Stearate)	3.50%
Stearyl Alcohol	2.00%
Stearic Acid	1.00%
TEGOSOFT® MM (Myristyl Myristate)	1.50%
TEGOSOFT® DC (Decyl Cocoate)	6.00%
TEGOSOFT® TN (C12-15 Alkyl Benzoate)	8.50%
Prunus Amygdaluy Dulcis (Sweet Almond) Oil	5.00%
Phase B	
TEGO® Care SE 121	2.00%
Glycerin	3.00%
Panthenol	0.50%
Allantoin	0.20%
Water	63.50%
Phase C	
TEGO® Carbomer 134 (Carbomer)	0.10%
Mineral Oil (30 mPas)	0.40%
Phase D	
Sodium Hydroxide (10% in water)	0.30%
Phase Z	
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 below 40 °C.

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

*Formulation was tested with 0.8% Phenoxyethanol; Ethylhexylglycerin (Euxyl PE 9010, Schülke & Mayr GmbH)

O/W Body Souffle Cream SZ 37/14-1	
Phase A	
AXOL® C 62 Pellets (Glyceryl Stearate Citrate)	1.50%
TEGIN® M Pellets (Glyceryl Stearate)	2.00%
TEGO® Alkanol 1618 (Cetearyl Alcohol)	3.00%
TEGOSOFT® DEC (Diethylhexyl Carbonate)	20.00%
Phase B	
TEGO® Care SE 121	1.00%
Glycerin	3.00%
Water	67.10%
Phase C	
TEGO® Carbomer 341 ER (Acrylates / C10-30 Alkyl Acrylates Crosspolymer)	0.20%
TEGOSOFT® DEC (Diethylhexyl Carbonate)	0.80%
Phase D	
Sodium Hydroxide (10% in water)	0.60%
Phase E	
TEGO® Betain 810 (Capryl/Capramidopropyl Betaine)	0.80%
Phase Z	
Preservative*, Perfume	q.s.

Preparation:

1. Heat phase A and B separately to 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 and E below 40 °C.

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

*Formulation was tested with 1.0% Phenoxyethanol; Ethylhexylglycerin (Euxyl PE 9010, Schülke & Mayr GmbH)

Body Lotion SZ 29/14-A4	
Phase A	
TEGIN® 4100 Pellets (Glyceryl Stearate)	0.50%
Stearic Acid	0.50%
TEGOSOFT® APM (PPG-3 Myristyl Ether)	1.30%
TEGOSOFT® OP (Ethylhexyl Palmitate)	1.60%
TEGOSOFT® DEC (Diethylhexyl Carbonate)	1.60%
Phase B	
TEGO® Care SE 121	2.00%
Glycerin	3.00%
Water	87.90%
Phase C	
TEGO® Carbomer 141 (Carbomer)	0.20%
TEGOSOFT® OP (Ethylhexyl Palmitate)	0.80%
Phase D	
Sodium Hydroxide (10% in water)	0.60%
Phase Z	
Preservative*, Perfume	q.s.

Preparation:

1. Heat Phase A and B separately to 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 below 40 °C.

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

*Formulation was tested with 0.8% Dipropylene Glycol; Methylparaben; Ethylparaben; Aqua; Methylisothiazolinone (Microcare MEM, Thor GmbH)

O/W Cream SZ 29/14-B5	
Phase A	
TEGIN® M Pellets (Glyceryl Stearate)	5.50%
Stearyl Alcohol	2.00%
TEGOSOFT® APS (PPG-11 Stearyl Ether)	3.20%
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	3.20%
TEGOSOFT® OP (Ethylhexyl Palmitate)	7.60%
Phase B	
TEGO® Care SE 121	5.50%
Glycerin	2.00%
Water	71.00%
Phase Z	
Preservative*, Perfume	q.s.

Preparation:

1. Heat Phase A and B separately to 75 °C.
2. Add phase A to phase B with stirring.[1)]
3. Homogenize.

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

*Formulation was tested with 0.8% Dipropylene Glycol; Methylparaben; Ethylparaben; Aqua; Methylisothiazolinone (Microcare MEM, Thor GmbH)

O/W Body Butter SZ 29/14-C2	
Phase A	
TEGO® Alkanol 1618 (Cetearyl Alcohol)	3.00%
TEGIN® M Pellets (Glyceryl Stearate)	5.00%
TEGOSOFT® MM (Myristyl Myristate)	1.00%
TEGOSOFT® CR (Cetyl Ricinoleate)	1.00%
TEGOSOFT® DC (Decyl Cocoate)	7.00%
TEGOSOFT® OER (Oleyl Erucate)	5.00%
Glycine Soja (Soybean) Oil	3.00%
Butyrospermum Parkii (Shea) Butter	7.00%
Theobroma Cacao (Cocoa) Seed Butter	5.00%
Phase B	
TEGO® Care SE 121	3.50%
Glycerin	5.00%
Water	54.50%
Phase Z	
Preservative*, Perfume	q.s.

Preparation:

1. Heat Phase A and B separately to 75 °C.
2. Add phase A to phase B with stirring.[1)]
3. Homogenize.

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

*Formulation was tested with 1.0% Phenoxyethanol; Ethylhexylglycerin (Euxyl PE 9010, Schülke & Mayr GmbH)

Natural O/W Lotion SZ 29/14-E1	
Phase A	
TEGOSOFT® OER (Oleyl Erucate)	3.00%
TEGOSOFT® MM (Myristyl Myristate)	2.00%
TEGOSOFT® DC (Decyl Cocoate)	2.00%
Simmondsia chinensis (Jojoba) Seed Oil	5.00%
TEGO® Alkanol 1618 (Cetearyl Alcohol)	1.00%
Phase B	
TEGO® Care SE 121	3.00%
Water	74.50%
Phase C	
Glycerin	3.00%
Xanthan Gum	0.50%
Water	5.00%
Phase D	
Sodium Hydroxide (10% in water)	0.20%
Phase E	
Benzyl Alcohol, Glycerin, Benzoic Acid, Sorbic Acid (Rokonsal BSB-N, Ashland)	0.80%
Phase Z	
Perfume	q.s.

Preparation:

1. Heat Phase A and B separately to 80 °C.
2. Add phase A to phase B with stirring.[1)]
3. Homogenize.
4. Add phase D below 30 °C.
5. Add phase E and adjust pH of formulation 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**.

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