

AXOL[®] C 62 Pellets

Emulsifier for the formulation of cosmetic O/W creams and lotions

- PEG-free, Food grade emulsifier based on vegetable raw materials
- Stable emulsions from pH 5.5 – 8.0
- Usage concentration of 1.5 – 2.0 %
- Ease to handle

Personal Care

INCI name (CTFA name)

Glyceryl Stearate Citrate

Chemical and physical properties (not part of specifications)

Form	pellets
HLB value	approx. 12

Properties

- AXOL® C 62 Pellets is a hydrophilic, PEG-free emulsifier based on vegetable raw materials.
- AXOL® C 62 Pellets is suitable for the hot emulsification process of O/W creams and lotions.
- AXOL® C 62 Pellets is easy to handle due to its pellets form.
- AXOL® C 62 Pellets forms stable emulsions with all commonly used oils for skin care products, e. g. mineral oils, vegetable oils and synthetic esters.
- Substances with specific properties, such as UV filters and moisturisers are well tolerated by the emulsion based on AXOL® C 62 Pellets.
- Emulsions based on AXOL® C 62 Pellets show a good application and stability profile, if creams contain 20 – 35 % and lotions 10 – 25 % oil phase.
- The emulsions are distinguished by high stability towards heat and freezing stress; stability between –25 °C and +45 °C is attainable.
- The amount of AXOL® C 62 Pellets used, referred to the emulsion, is 1.5 – 2.0 %. It is suggested to add AXOL® C 62 to the oil phase.
- As consistency enhancers polar waxes such as TEGO® Alkanol 16 (Cetyl Alcohol), TEGO® Alkanol 18 (Stearyl Alcohol) and/or TEGO® Alkanol 1618 (Cetearyl Alcohol) as well as TEGIN® M Pellets (Glyceryl Stearate) and Stearic Acid proved to be most effective. Water-swelling organopolymers may improve the freeze stability.
- The pH value of AXOL® C 62 Pellets products can be adjusted from 5.5 to 8.0.
- For buffering the pH value of emulsions, e. g. 0.1 % Disodium Phosphate is recommended, especially in the case of higher concentrations of AXOL® C 62 Pellets.

Application

AXOL® C 62 Pellets is especially suitable for O/W creams, lotions and wipes for

- Facial and body care
- Baby care
- Sunscreens
- After Sun care

Preparation

Processing

It is suggested to add AXOL® C 62 Pellets to the oil phase.

We recommend to heat oil phase and water phase separately to approx. 80°C.

Furthermore we recommend adding the hot oil phase to the hot water phase **while stirring**. The coarsely dispersed pre-emulsion is then homogenized.

If the above mentioned processing is not possible, we recommend to combine the hot water and oil phase **without stirring** (to avoid the formation of a water-in-oil emulsion) and to start afterwards with the homogenisation.

During cooling, a constant horizontal and vertical movement of the emulsion has to be ensured. The viscosity of the liquid emulsion increases to a creamy consistency, as the hydrated consistency promoters solidify.

The dispersion of TEGO® Carbomer 141 or TEGO® Carbomer 134 in oil is added at 60°C. Then the emulsion is homogenized again for a short time.

Perfume or temperature-sensitive substances are added at 35 – 45 °C.

Neutralization of the emulsion is done at approx. 35 °C.

Suggested usage concentration

1.5 – 2.0 % AXOL® C 62 Pellets

Packaging

600 kg pallet (24 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 accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

Guide Line Formulations

O/W Body Cream F 21/01-13	
Phase A	
AXOL® C 62 Pellets	1.50 %
TEGO® Alkanol 1618 (Cetearyl Alcohol)	6.00 %
TEGOSOFT® DC (Decyl Cocoate)	4.00 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	6.00 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	8.00 %
Phase B	
Glycerin	5.00 %
Disodium Phosphate	0.10 %
Water	67.90 %
Phase C	
TEGO® Carbomer 134 (Carbomer)	0.20 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	0.80 %
Phase D	
Sodium Hydroxide (10 % in water)	0.50 %
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. Homogenise. 4. Cool with gentle stirring to approx. 60 °C and add phase C. 5. Homogenise 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 .	

O/W Face Cream F 32/01-7	
Phase A	
AXOL® C 62 Pellets	1.50 %
TEGIN® M Pellets (Glyceryl Stearate)	2.00 %
TEGO® Alkanol 1618 (Cetearyl Alcohol)	2.00 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	7.00 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	6.40 %
TEGOSOFT® CR (Cetyl Ricinoleate)	1.00 %
Squalane, Ubiquinone (Lipogard, Pentapharm)	3.00 %
Benzylidene Malonate Polysiloxane (Parsol SLX, Roche)	3.00 %
Ceramide III B (Ceramide NP)	0.10 %
Macadamia Ternifolia Nut Oil	3.00 %
Tocopheryl Acetate	1.00 %
Phase B	
Glycerin	3.00 %
Panthenol	0.50 %
Water	64.90 %
Phase C	
TEGO® Carbomer 134 (Carbomer)	0.20 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	0.80 %
Phase D	
Sodium Hydroxide (10 % in water)	0.60 %
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. Homogenise. 4. Cool with gentle stirring to approx. 60 °C and add phase C. 5. Homogenise 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 .	

O/W Lotion F 26/01-2	
Phase A	
AXOL® C 62 Pellets	1.50 %
TEGO® Alkanol 1618 (Cetearyl Alcohol)	1.00 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	6.00 %
Mineral Oil (30 mPas)	5.50 %
Tocopheryl Acetate	1.00 %
Phase B	
Glycerin	5.00 %
Panthenol	0.50 %
Water	72.90 %
Phase C	
TEGO® Carbomer 141 (Carbomer)	0.20 %
Mineral Oil (30 mPas)	0.80 %
Phase D	
Sodium Hydroxide (10 % in water)	0.60 %
Preservative, Perfume	q.s.
Phase E	
Ethanol	5.00 %
Preparation:	
<ol style="list-style-type: none"> Heat phase A and B separately to approx. 80 °C. Add phase A to phase B with stirring.¹⁾ Homogenise. Cool with gentle stirring to approx. 60 °C and add phase C. Homogenise for a short time. 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 .	

O/W Liquid Lotion Sensitive Skin (Wipes) MK 31/02-6	
Phase A	
AXOL® C 62 Pellets	2.00 %
TEGIN® M Pellets (Glyceryl Stearate)	1.30 %
TEGO® Alkanol 18 (Stearyl Alcohol)	0.50 %
Stearic Acid	0.20 %
TEGOSOFT® OP (Ethylhexyl Palmitate)	8.50 %
Mineral Oil (30 mPas)	8.00 %
Phytosphingosine	0.05 %
Potassium Stearate	0.50 %
Phase B	
Water	17.00 %
Glycerin	3.00 %
Sodium Hydroxide (10 % in water)	0.30 %
Phase C	
Water	58.65 %
Phase D	
Preservative, Perfume	q.s.
Preparation:	
<ol style="list-style-type: none"> Heat phase A and B separately to 80 °C. Add phase A to phase B with stirring.¹⁾ Homogenise. Heat phase C to approx. 60 °C and add to phase A/B with stirring. Homogenise. Cool with gentle stirring. 	
¹⁾ Important: If phase A has to be charged into the vessel first, phase B must be added without stirring .	
Shake before use!	

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