

TAGAT® CH 40

TAGAT® CH 60

TAGAT® L 2

TAGAT® O 2 V

TAGAT® S

TAGAT® S 2

Mild nonionic surfactants, solubilizers

- mild nonionic secondary surfactants for hair and skin
- solubilizers of lipophilic substances
- hydrophilic emulsifiers for O/W systems
- based on vegetable raw materials

Personal Care

<b>TAGAT® Product</b>	<b>INCI Name (CTFA name)</b>
TAGAT® CH 40 TAGAT® CH 60	PEG-40 Hydrogenated Castor Oil PEG-60 Hydrogenated Castor Oil
TAGAT® L 2	PEG-20 Glyceryl Laurate
TAGAT® O 2 V	PEG-20 Glyceryl Oleate
TAGAT® S TAGAT® S 2	PEG-30 Glyceryl Stearate PEG-20 Glyceryl Stearate

<b>Chemical and physical properties (not part of specifications)</b>	<b>TAGAT® CH 40</b>	<b>TAGAT® CH 60</b>	<b>TAGAT® L 2</b>
Form (25 °C)	pasty, turbid	pasty solid, turbid	liquid
HLB	app. 13	app. 15	app. 16

<b>Solubility at 10 % concentration and 25 °C in</b>	<b>TAGAT® CH 40</b>	<b>TAGAT® CH 60</b>	<b>TAGAT® L 2</b>
Water	soluble	soluble	soluble
Vegetable oils	soluble with slight turbidity	soluble with slight turbidity	insoluble
Paraffin oil	soluble with slight turbidity	soluble with slight turbidity	insoluble
Cosmetic alcohol	soluble	soluble	soluble

<b>Chemical and physical properties (not part of specifications)</b>	<b>TAGAT® O 2 V</b>	<b>TAGAT® S</b>	<b>TAGAT® S 2</b>
Form (25 °C)	liquid	semi-solid	semi-solid
HLB	app. 15	app. 16	app. 15

<b>Solubility at 10 % concentration and 25 °C in</b>	<b>TAGAT® O 2 V</b>	<b>TAGAT® S</b>	<b>TAGAT® S 2</b>
Water	soluble	soluble with slight turbidity	soluble with slight turbidity
Vegetable oils	insoluble	insoluble	insoluble
Paraffin oil	insoluble	insoluble	insoluble
Cosmetic alcohol	soluble	soluble	soluble

Properties	TAGAT® CH 40	TAGAT® CH 60	TAGAT® L 2	TAGAT® O 2 V	TAGAT® S	TAGAT® S 2
liquid			•	•		
universal, common nonionic surfactant	•	•				
viscosity builder			•		•	•
best foam effects (stabilizing)			•			
slight foam reduction	•	•		•		
irritancy mitigator	•	•			•	•
oil solubilizer	•		•	•		•
clearly soluble in water	•	•	•	•		
vitamin/fragrance solubilizer	•	•		•		
O/W emulsifier for creams and rinses					•	•
stabilizing of conditioning additives	•	•			•	•
improves skin feel/refatting effect	•	•	•			
emollient –skin softener			•	•		

## Application in

- shampoos
- shower and foam bath preparations
- O/W emulsions

TAGAT® CH 40 and TAGAT® CH 60 are used as non-ionic surfactants and as universal solubilizer in toiletry products like shampoo and shower preparations.

With TAGAT® S and TAGAT® CH 60 it is possible to stabilize dispersed conditioning agents, e. g. in 2-in-1-shampoos.

TAGAT® O 2 V is preferred for the solubilization of polar oils and vitamins in aqueous systems.

Very mild formulations are obtainable with high ethoxylated non-ionic surfactants. The irritating effect of laureth sulphate and even the low irritation potential of surfactant systems like SLES/CAPB may be suppressed totally by using TAGAT® S or TAGAT® CH 60.

TAGAT® L 2 is a non-ionic surfactant with foam enhancing properties.

TAGAT® S and TAGAT® S 2 are emulsifiers for oil-in-water emulsions. As consistency enhancing additives TEGIN® M (glyceryl stearate) and/or TEGO® Alkanol (cetyl alcohol and/or stearyl alcohol) are recommended.

## Preparation

Solubilization: If using one of the liquid TAGAT® types as a solubilizer in aqueous surfactant solutions, it is generally sufficient to mix it intensively with the oils, followed by addition of the other ingredients. Solid or semi-solid TAGAT® types are processed warm. In principle moderate warming facilitates and accelerates solubilization.

O/W emulsions: TAGAT® products are heated together with fats and oil-soluble substances to 65 – 80 °C. The water phase, at the same temperature, is stirred into the oil phase. This results in a low viscosity, fine- to medium-dispersed pre-emulsion, that is homogenized at 60 °C. For creams the particle size of the internal phase should be adjusted to 1 – 3 µm, for lotions below 1 µm. The emulsion is cooled to the filling temperature of 35 to 30 °C, ensuring continual slight motion by stirring. Allow approx. 30 minutes for this cooling process. Add perfume at approx. 45 °C.

## Packing

TAGAT® CH 40:  
880 kg pallet (4 x 220 kg drum)

all other types:  
800 kg pallet (4 x 200 kg drum)

## 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.

## Guide Line Formulations

Cream base (DAC)	
<b>Phase A</b>	
TEGIN® M (Glyceryl Stearate)	4.0 %
TEGO® Alkanol 16 (Cetyl Alcohol)	6.0 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	7.5 %
Petrolatum, white	25.5 %
TAGAT® S 2	7.0 %
<b>Phase B</b>	
Propylene glycol	10.0 %
Water	40.0 %
<b>Preparation:</b> Heat A and B separately to about 70 °C. Stir B slowly into A; stir until cool.	

Refatting shower bath	
ANTIL® 141 liquid (Propylene Glycol; PEG-55 Propylene Glycol Oleate)	3.0 %
Perfume	q. s.
TAGAT® S 2	6.0 %
Joboba oil	0.5 %
α-Olefin sulphonate (sodium salt 37 %)	30.0 %
Water	ad 100 %
TEGO® Betain L 50 (Cocamidopropyl Betaine)	9.6 %
TEGO® Pearl S 33 (Sodium C14-16 Olefin Sulfonate; Glycol Distearate; Cocamidopropyl Betaine; Sorbitan Laurate)	3.0 %
Preservative, colour	q. s.
<b>Preparation:</b> Mix in the given order.	

Clear skin caring shower gel for dry skin	
TEGOSOFT® GC (PEG-7 Glyceryl Cocoate)	2.0 %
TAGAT® CH 40 (PEG-40 Hydrogenated Castor Oil)	2.5 %
ISOLAN® GO 33 (Polyglyceryl-3 Oleate)	1.0 %
Fragrance	0.3 %
Sodium Laureth Sulfate, 28%	42.9 %
Water	37.6 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	10.7 %
LACTIL® (Sodium Lactate; Sodium PCA; Glycine; Fructose; Urea; Niacinamide; Inositol; Sodium Benzoate; Lactic Acid)	1.0 %
ANTIL® 171 (PEG-18 Glyceryl Oleate/Cocoate)	2.0 %
<b>Preparation:</b> Mix in the given order.	

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**Product specification**
**TAGAT L 2**

Specification No.: TE-00496  
(5716-0)  
Code: S00: STANDARD  
Version: 7  
Version from: 11.01.1999  
Print-out date: 25.10.2007

Insp. Characteristic	Method	Limits	Unit	
Dioxane	GM_0616_01	< = 5	ppm	X
Ethylenoxide	GM_0616_01	< = 1	ppm	X
Hydroxyl value	GM_0020_01	60,0-80,0	mg KOH/g	X
Iodine value	GM_0050_01	< = 4,0	g I/100g	C
Acid Value	GM_0010_01	< = 2,0	mg KOH/g	X
Saponification Value	GM_0030_01	50,0-70,0	mg KOH/g	X
Water Content	GM_0080_01	< = 3,0	%	X

Print on inspection document:

X = Actual measured value reported.

C = 'Conforms' is printed as characteristic value.

This print-out is valid unsigned.

# TAGAT® L 2

## Product data record

### 1. General information

#### 1.1 Manufacturer/Supplier

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#### 1.2 Product Description

##### 1.2.1 Raw material category Solubilizer

##### 1.2.2 Ingredients according to INCI

PEG-20 Glyceryl Laurate

##### 1.2.3 Composition

Components	Source	Ratio
PEG-20 Glyceryl Laurate	vegetable	100 %

This composition information serves for information of our customers only.  
It is neither relevant for the composition listing according to Regulation (EC) No 1223/2009, nor does it reflect the chemical composition according to the different chemical regulations in the world which is disclosed in the table "information on ingredients/hazardous components" in the relevant parts of the respective (Material) Safety Data Sheets.

##### 1.2.4 Solvents, preservatives and other additives

	CAS No.	EINECS / EC No.	content	Function
no additives				

No components which are listed in Annex II of the Regulation (EC) No 1223/2009 and its modifications and updates are added to and are not to be expected in the above mentioned product due to the raw materials used and the production process.

## 2. Information on production process

General description of production process:  
Ethoxylated fatty acid glycerids

The product is not irradiated.

TAGAT® L 2 is produced in the strictest absence of any animal derived material of any type.

Residual plant based source (dominant origin of main constituents): rapeseed oil, palm kernel oil

GMO-Status:

The item does not contain ingredients that might have been derived from GM sources. However max 0.9 % cross-contamination is possible. Any protein or DNA is not present. Consequently the product will be PCR negative when tested.

### 2.1 By products

		method
Residual solvents	not applicable	
Nitrosamines	not applicable	
Free amines	not applicable	Chromatography
Monochloroacetic acid	not applicable	Chromatography
Dichloroacetic acid	not applicable	Chromatography
1,4-Dioxane	max. 5 ppm	
Pesticides	meets the valid regulatory requirements for limits on agricultural pesticides	
Total heavy metals	max. 20 ppm	AAS-ICP
As, Cd, Co, Cr, Hg, Ni, Pb, Sb	Each < 1 ppm	AAS-ICP
Latex	not to be expected in the product due to the raw materials used and the production process	
VOC	< 3 % according to SR (Swiss Right) 814.018	

### 2.2 CMR (Carcinogenic, Mutagenic or Reprotoxic)

The use in cosmetic products of substances classified as CMR substances, of category 1A or 1B or 2 under Part 3 of Annex VI to Regulation (EC) No 1272/2008 shall be prohibited.

Further Information:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:342:0059:0209:en:PDF>

Some of the CMR substances mentioned below and listed in Annex VI to Regulation (EC) No 1272/2008 are used as starting materials or solvents for the production of our cosmetic raw materials and may require reporting under California Proposition 65 or the Safe Cosmetics Act, SB 484.



The presence of these prohibited substances has to be seen as non-intended. It is stemming from impurities of the starting materials or the manufacturing process which is technically unavoidable in good manufacturing practice.

CMR substance	Starting material	max. concentration	method
Ethylene Oxide	yes	1 ppm	
Propylene Oxide	no		
Octamethylcyclotetrasiloxane (D4)	no		
2-Ethylhexanoic Acid	no		
n-Hexane	no		
Methyl Chloride	no		
Dimethyl Sulphate	no		

### 2.3 “Allergens” according to the Regulation (EC) No 1223/2009

The presence of substances, the mentioning of which is required under the column ‘Other’ in Annex III, shall be indicated in the list of ingredients in addition to the terms parfum or aroma.

The cosmetic raw materials and the cosmetic actives supplied by Evonik Personal Care are manufactured without the use of perfumes and fragrances. An analytical proof for the absence in traces of the substances to be mentioned in addition to the terms parfum or aroma is not performed in cosmetic raw materials, which are chemically produced.

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

### 2.4 Food Ingredients listed in Annex IIIa of Commission Directive 2007/68/EC.

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

## 3. Microbiological status

Total Viable Count	max. 100 cfu/g
Pathogens*	absent/g

\*Pathogens are: Enterobacteria, Pseudomonas, Enterococci, Candida albicans, Staphylococci

## 4. Shelf life / storage conditions

24 months after production (unopened original packaging)

## 5. Regulatory Status

5.1 Customs tariff number 34021300

### 5.2 Regulatory status (chemical regulations)

Europe

Components	REACH status	CAS No.	EINECS / EC No.
PEG-20 Glyceryl Laurate	Polymer	51248-32-9	Polymer

Other countries

Country		yes / no	Remark
Australia	AICS:	yes	
China	IECSC:	yes	
Canada	DSL: NDSL:	yes	
Taiwan	TCSI:	yes	

In the following countries the relevant authorities currently do not require pre-market approval for cosmetic raw materials:

Brazil, Japan, South Korea, Philippines, USA

#### 5.2.1 Regulatory status (cosmetic regulation)

Country		yes / no	Remark
China	CFDA:	yes	
Japan	JSQI:	yes	JSQI No. 504428, but specifications not controlled

## 6. Toxicology and Ecotoxicology

Refer to summary of ecotoxicological and toxicological data