

PRODUCT INFORMATION

WARADUR® GE

Product Description

WARADUR® GE (INCI: Glyceryl Montanate) is a montan ester wax ($\leq$ C 36 acid triglyceride). Montanic acids are straight, long-chained monocarboxylic acids, which in WARADUR® GE are esterified with glycerol to glyceryl montanate. The corresponding glycerol esters exhibit a low volatility and good thermal stability.

General Advantages

High effectiveness at low concentrations:

- Stabilising and oil-binding/oil-regulating
- Improves water resistance in sun protective formulations
- Texture optimisation
- Dispersing aid for pigments in decorative cosmetics (e.g. mascara, eye liner)

In cosmetic formulations, WARADUR® GE can support the stability of the formulation and improve the skin protection. WARADUR® GE can trigger an occlusion effect, which reduces skin moisture evaporation and provides the skin with a protective, breathable film. This property can also improve the cold protection of cosmetic formulations at low temperatures resp. strong wind. In w/o emulsions this functionalised wax acts stabilising and oil-binding. In concentrations above 1 % WARADUR® GE can improve the long-term stability and provides a soft skin sensation.

Based on its a.m. properties WARADUR® GE can be used to re-formulate candelilla wax based compositions. Technical support available upon request.

Examples of Use

WARADUR® GE can be used to manufacture care products, hair wax/hair styling creams, skin protection products, all-purpose creams, sun protective formulations, deodorant stick formulations, mascara and eyeliner. For further information, please contact application@voelpker.com.

Delivery Specifications *

Characteristics	Unit	Target value	Method
Acid value *	mg KOH/g	13 – 30	ISO 2114
Drop point *	°C	80 – 88	ASTM 3954
Saponification value	mg KOH/g	approx. 130 – 165	ISO 3681
Colour	–	pale yellow	AA 3.2.1.505
Viscosity @ 120 °C	mPas	15 – 30	AA 3.2.1.520
Density	g/cm ³	1.00 – 1.02	Ph. Eur. 2.2.5

Packaging and Handling

Physical form	Flakes, also available as powder
Packaging	Paper bag or Big Bag
Storage	The maximum shelf life is 5 years after production. Thereafter, tests of the chemical characteristics are recommended. After delivery, a minimum remaining shelf life at the customer of 1.5 years is warranted.

Safety

WARADUR® GE

- is made from a fossil biological source
- based on data from similar montan ester waxes: expected to reach the criteria for inherent biodegradability (OECD Guideline 301 D, Closed Bottle Test)
- is not classified as carcinogenic, mutagenic or reprotoxic; no health or environmental hazards are known, provided it is applied in industrial and professional settings

Delivery Time and Availability

Standard delivery time: 2 – 3 weeks. Preconditions can be met for achieving shorter delivery times on standard products when demanded by the market.

Legislation

Food contact legislation:

- FDA 175.105
- FDA 177.2600
- Commission Regulation (EU) No 10/2011 of 14 January 2011

Other legislation:

- RoHS and CONEG compliant
- CAS No: 68476-38-0
- EC No: 270-679-8
- Listed in all relevant national inventories

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