

**PRODUCT INFORMATION**

# WARADUR® E

## Product Description

WARADUR® E (INCI: Glycol Montanate) is a montan ester wax (C18 – 36 ethylene glycol ester). Montanic acids are straight, long-chained monocarboxylic acids, which in WARADUR® E are esterified with ethylene glycol to glycol montanate.

## General Advantages

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

In cosmetic formulations, WARADUR® E can support the stability and improves the skin protection. WARADUR® E can trigger an occlusion effect, which reduces skin moisture evaporation and proved 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 over 1 % WARADUR® E can improve the long-term stability and provides a soft skin sensation.

On the basis of its a.m. properties WARADUR® E can be used to reformulate Candelilla wax based composition. Technical support available upon request.

## Examples of Use

WARADUR® E can be used to manufacture cosmetics as for example in mascara, hair wax, deodorant sticks as consistence-giving and oil-binding wax. Further possible uses: skin protection products, all-purpose creams, sun protective formulations, stick formulations, eye liner.

## Delivery Specifications \*

Characteristics	Unit	Target value	Method
Acid value *	mg KOH/g	15 – 20	ISO 2114
Saponification value *	mg KOH/g	140 – 160	ISO 3681
Drop point *	°C	82 – 88	ASTM 3954
Colour	–	pale yellow	AA 3.2.1.505
Viscosity @ 120 °C	mPas	15 – 20	AA 3.2.1.520
Density	g/cm <sup>3</sup>	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	Store at ambient temperature on a dry place. Protect from heat/overheating and direct sunlight. The minimum remaining period is 1.5 years and is defined as the minimum shelf life at the customer. Thereafter, tests of the chemical characteristics are recommended. The maximum shelf life of 5 years is indicated.

## Safety

WARADUR® E

- 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, FDA 178.3770
- Commission Regulation (EU) No 10/2011 of 14 January 2011

Other legislation:

- REACh, RoHS and CONEG compliant
- CAS No: 73138-45-1
- EC No: 277-291-8
- Listed in all relevant National Inventories

For further information, please contact [application@voelpker.com](mailto:application@voelpker.com).