PRODUCT INFORMATION

WARADUR® GE

Product Description

WARADUR® GE is a glycerol ester wax of montanic acids and exhibits a slightly higher molecular weight than WARADUR® E. Montanic acids are straight-chained monocarboxylic acids with a chain length in the range of C28 – C32. The corresponding glycerol esters exhibit chain length in the range of approx. C60 avg. and provide this wax with a low volatility, good thermostability and low migration rates.

General Advantages

High effectiveness at low concentrations: WARADUR® GE is extremely versatile and suitable for a wide range of plastics applications as a multi-purpose additive, e.g. release agent, flow improver, dispersing agent, gloss booster, surface improver. WARADUR® GE is suitable for engineering plastics, thermosets, PVC, etc.

Examples of Use

- Thermoplastics: PA, PBT, TPE, PET, PC, PVC, styrenics
- Thermosets: epoxy resins, phenolic resins, polyurethane
- Dispersing agents for colour masterbatches and filled plastics (talc, glass fibre)

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/cm³	1.00 – 1.02	Ph. Eur. 2.2.5

Packaging and Handling

Physical form	Flakes or powder
Packaging	Paper bag or Big Bag
Storage	Store at ambient temperature on a dry place. Protect from heat/overheating and direct sunlight. 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 fossilised plant wax
- 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 Adhesives ("montan wax")
- FDA 177.2600 Rubber articles intended for repeated use ("montan wax")
- Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food

Other legislation:
- REACH, RoHS and CONEG compliant
- Listed in all relevant national inventories

For further information, please contact application@voelpker.com.

The information contained herein is believed to be accurate and reliable as of the date issued. However, we do not warrant or guarantee the accuracy or reliability, in particular not for any specific intended use by the customer. It is the responsibility of those to whom we supply our products directly or indirectly to ensure that their use of the products complies with existing regulations, laws, legislations and proprietary rights. The information given by Völpker Spezialprodukte does not exempt the customer from carrying out inspections and analyses on goods purchased.

Issued: 2021-07-28, supersedes all previous editions

Völpker Spezialprodukte GmbH · Fabrikstraße 1 · 39393 Völpke · Germany · Telephone +49 39402 962-0 · www.voelpker.com