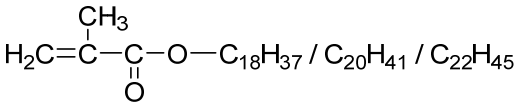
Behenyl Methacrylate 1822 F (BEMA 1822 F)

Methacrylic acid ester, for manufacturing polymers and for use as a feed stock for syntheses



CAS No.:
32360-05-7 (C_{18})
45294-18-6 (C_{20})
16669-27-5 (C_{22})

EINECS No.:
251-013-5 (C_{18})
256-220-4 (C_{20})
240-714-1 (C_{22})

Molecular formula

$C_{22}H_{42}O_2$
$C_{24}H_{46}O_2$
$C_{26}H_{50}O_2$

Molar mass:
338.6 kg/kmol (C_{18})
366.7 kg/kmol (C_{20})
394.7 kg/kmol (C_{22})

Product specification

Assay (Gas chromatography)	min. 98.0 %
Water content (ASTM E 203)	max. 0.1 %
Acid content (calc. as methacrylic acid, ASTM D 1613)	max. 0.05 %
Color on dispatch (APHA, ASTM D 1209)	max. 250
Standard stabilization (HPLC)	100 ± 20 ppm MEHQ

The aforementioned data shall constitute the agreed contractual quality of the product at the time of passing of risk. The data are controlled at regular intervals as part of our quality assurance program. Neither these data nor the properties of product specimens shall imply any legally binding guarantee of certain properties or of fitness for a specific purpose. No liability of ours can be derived therefrom.

Other properties

		Labelling according to local Directives
Appearance	Waxy solid	see SDS
Density at 60 °C	0.85 g/cm³	
≤C_{16} / C_{18} / C_{20} / C_{22} / ≥C_{24} ester	max. 1.5 % / 40 – 46 % / 8 – 14 % / 42 – 48 % / max. 2.0 %	
Melting point	43 – 45 °C	

Applications

Behenyl Methacrylate 1822 F (BEMA 1822 F) forms homopolymers and copolymers. Copolymers of Behenyl Methacrylate 1822 F (BEMA 1822 F) can be prepared with (meth)acrylic acid and its salts, amides and esters, and with methacrylates, acrylonitrile, maleic acid esters, vinyl acetate, vinyl chloride, vinylidene chloride, styrene, butadiene, unsaturated polyesters and drying oils, etc. Behenyl Methacrylate 1822 F (BEMA 1822 F) is also a very useful feedstock for chemical syntheses, because it readily undergoes addition reactions with a wide variety of organic and inorganic compounds.

Behenyl Methacrylate 1822 F (BEMA 1822 F) is used in oil additives as flow/viscosity index improver for highly paraffinic oils and as pour point depressant. Behenyl Methacrylate 1822 F (BEMA 1822 F) may also be employed in textile finishes, varnishes, pressure-sensitive adhesives or as co-monomer in paint-resins & plastics.

Features & Benefits

Behenyl Methacrylate 1822 F (BEMA 1822 F) is a mixture of mainly C_{18}, C_{20} and C_{22} fatty alcohol methacrylates, which are water insoluble, low volatility, monofunctional monomer with a characteristic high reactivity of methacrylates and a hydrophobic moiety. Behenyl Methacrylate 1822 F (BEMA 1822 F) can be used to impart the following properties to polymers:

- Hydrophobicity
- Adhesion
- Weather resistance
- Low shrinkage
- Water/Chemical resistance
- Flexibility
- Impact strength

Storage & Handling

In order to prevent polymerization, Behenyl Methacrylate 1822 F (BEMA 1822 F) must always be stored under air, and never under inert gases. The presence of oxygen is required for the stabilizer to function effectively. It has to contain a stabilizer and the storage temperature must not exceed 35 °C. Under these conditions, a storage stability of one year can be expected upon delivery. In order to minimize the likelihood of overstorage, the storage procedure should strictly follow the “first-in-first-out” principle.

If Behenyl Methacrylate 1822 F (BEMA 1822 F) is crystallized the product can be melted safely with heating temperatures up to 60 °C. It should not be stored at this temperature for more than 5 days in order to prevent degradation in quality and premature formation of polymer factions. In order to reduce thermal stress during the melting process air convection should be very good. Under such favorable conditions melting can be achieved within 24 hours.

Storage tanks and pipes should be made of stainless steel or aluminum. Storage tanks, pumps and pipes should be earthed.

Safety

A Safety Data Sheet has been compiled for Behenyl Methacrylate 1822 F (BEMA 1822 F) that contains up-to-date information on questions relevant to safety.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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