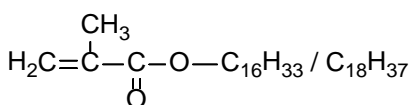


Stearyl Methacrylate 1618 F (SMA 1618 F)

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



CAS No.:
2495-27-4 (C₁₆)
32360-05-7 (C₁₈)

EINECS No.:
219-672-3 (C₁₆)
251-013-5 (C₁₈)

Molecular formula

C₂₀H₃₈O₂
C₂₂H₄₂O₂

Molar mass:
310.5 kg/kmol (C₁₆)
338.6 kg/kmol (C₁₈)

Product specification

Assay (Gas chromatography)	min. 97.0 %
Water content (ASTM E 203)	max. 0.1 %
Acid content (calc. as methacrylic acid, ASTM D 1613)	max. 0.02 %
Color on dispatch (APHA, ASTM D 1209)	max. 150
Standard stabilization (HPLC)	100 ± 20 ppm MEHQ 10 ± 10 ppm HQ

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

Appearance
Density at 60 °C
≤C₁₄ / C₁₆ / C₁₈ / ≥C₂₀ ester
Melting / Boiling point
Viscosity (dynamic, 25 °C)
Flash point

pale yellow liquid
0.86 g/cm³
max. 5 % / 25 – 30 % / 65 – 70 % / max. 3.0 %
19 °C / 190 – 210 °C at 64 hPa
11 mPas · s
196 °C

Labelling according to local Directives

see SDS

Applications

Stearyl Methacrylate 1618 F (SMA 1618 F) forms homopolymers and copolymers. Copolymers of Stearyl Methacrylate 1618 F (SMA 1618 F) can be prepared with (meth)acrylic acid and its salts, amides and esters, and with (meth)acrylates, acrylonitrile, maleic acid esters, vinyl acetate, vinyl chloride, vinylidene chloride, styrene, butadiene, unsaturated polyesters and drying oils, etc. Stearyl Methacrylate 1618 F (SMA 1618 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.

Stearyl Methacrylate 1618 F (SMA 1618 F) is used in oil additives as flow/viscosity index improver for highly paraffinic oils and as pour point depressant. Stearyl Methacrylate 1618 F (SMA 1618 F) may also be employed in concrete and paper coatings, textile finishes, varnishes, pressure-sensitive adhesives. Stearyl Methacrylate 1618 F (SMA 1618 F) may be incorporated as co-monomer in paint resins, hair-care compositions, plastics and floor care products.

Features & Benefits

Stearyl Methacrylate 1618 F (SMA 1618 F) is mixture of mainly C₁₆ alcohol (Cetyl) and C₁₈ alcohol (Stearyl) methacrylates. Stearyl Methacrylate 1618 F (SMA 1618 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, Stearyl Methacrylate 1618 F (SMA 1618 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. For extended storage periods over 4 weeks it is advisable to replenish the dissolved oxygen content.

If Stearyl Methacrylate 1618 F (SMA 1618 F) accidentally is crystallized the product should never be partially molten and taken, because the possible separation from the stabilizer. Ensure that there is no crystallized product in the container before use. Obtain information from supplier/manufacturer before dissolving totally or partially crystallized product. The ambient temperature of the container may not exceed the stated temperature limit when melting the product or keeping it at moderate temperature.

The preferred construction material for tanks and pipes is stainless steel. Carbon steel is also acceptable, although the formation of rust may be a problem with product quality (color). Iron(III)-ions have been shown to be a weak polymerization initiator. If carbon steel is to be used, special procedures should be used to prepare the tank for use. Storage tanks, pumps and pipes should be earthed.

Safety

A Safety Data Sheet has been compiled for Stearyl Methacrylate 1618 F (SMA 1618 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.

September 2016