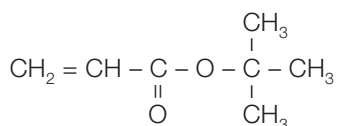


# tert-Butyl Acrylate (TBA)

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



CAS No.: 1663-39-4  
EINECS No.: 216-768-7

**Molecular formula**

C<sub>7</sub>H<sub>12</sub>O<sub>2</sub>

Molar mass: 128.2 kg/kmol

**Product specification**

Assay (Gas chromatography)	min. 99.0 %
Water content (ASTM E 203)	max. 0.04 %
Acid content (calc. as acrylic acid) (ASTM D 1613)	max. 0.1 %
Color on dispatch (APHA, ASTM D 1209)	max. 10
Standard stabilization (HPLC)	15 ± 5 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**

Appearance  
Physical form  
Density at 20 °C  
Refractive index n<sub>d</sub> at 20 °C  
Boiling point  
Freezing point  
Viscosity at 20 °C  
Vapor pressure at 23.4 °C

clear, colorless  
liquid  
0.883 g/cm<sup>3</sup>  
1.4103  
approx. 119 °C  
approx. -69 °C  
0.90 mPa · s  
20 mbar

**Labelling according to local Directives**  
see SDS

**Applications**

*tert*-Butyl Acrylate (TBA) forms homopolymers and copolymers. Copolymers of *tert*-Butyl Acrylate (TBA) can be prepared with 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. *tert*-Butyl Acrylate (TBA) is also a very useful feedstock for chemical syntheses, because it readily undergoes addition reactions with a wide variety of organic and inorganic compounds.

**Features & Benefits**

*tert*-Butyl Acrylate (TBA) is a monofunctional monomer with a characteristic high reactivity of acrylates and a bulky hydrophobic moiety. *tert*-Butyl Acrylate (TBA) can be used to impart the following properties to polymers:

- Chemical resistance
- Hydrophobicity
- Hardness
- Scratch resistance
- Adhesion
- Heat resistance
- High solids
- Weatherability

**Storage & Handling**

In order to prevent polymerization, *tert*-Butyl Acrylate (TBA) 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.

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 *tert*-Butyl Acrylate (TBA) 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.

October 2015