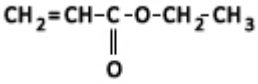
TECHNICAL DATA SHEET

ETHYL ACRYLATE STABILIZED

Acrylic ester used for polymer manufacturing and as a raw material for syntheses.

Molar Mass(g/mol): 100.12

Chemical formula:



Stoichiometric formula: $C_5H_8O_2$
CAS number: 140-88-5

For further information regarding this product please refer to:

Monomers Sales Synthomer

Tel:
eMail: monomers@synthomer.com

Property	Typical Value	Unit	Method[1]
Appearance	Clear, colorless liquid	-	Visually
Ethyl acrylate	min. 99.7	%	
Ethyl acetate	max. 0.08	%	
Ethyl propionate	max. 0.1	%	
Butanol	max. 0.001	%	
2-Butanol	max. 0.001	%	
Sum of butylalcohols	max. 0.001	%	
Methyl acrylate	max. 0.01	%	
Other organic impurities	max. 0.15	%	
Acidity (as Acrylic acid)	max. 0.01	%	ASTM D 1613
Color	max. 5	APHA	ASTM D 1209
Water	max. 0.05	%	ASTM E 1064
Inhibitor (MEHQ) *	0.001 - 0.002	%	ASTM D 3125
Refractive index **	1.405 - 1.408	-	DIN 51 423/ASTM D 1218

[1] internal method based upon the specified norm

* The inhibitor content can be increased above the standard limit as per customer's request

** nD20

Application Advice

Ethyl acrylate is used primarily for manufacturing homopolymers and copolymers. Ethyl acrylate can be copolymerized for instance with acrylic acid and its salts, esters and acrylamide, with methacrylic acid, methacrylates, acrylonitrile, styrene, maleic acid esters, vinyl acetate, vinyl chloride, butadiene, unsaturated polyesters etc. Ethyl acrylate is an important raw material and a starting material for many chemical syntheses.

Parameter	Value, Unit
Appearance, form	Transparent, colorless, clear liquid
Odor	Characteristic, pungent
Boiling point	99 – 100 °C
Melting point	(-72) – (-71) °C
Vapour pressure at 0°	1.2 kPa
Vapour pressure at 20°C	3.94 kPa
Vapour pressure at 50°C	16.8 kPa
Flash point (Closed cup)	8 – 9 °C
Flash point (Open cup)	9 -19 °C
Explosion limit – upper at 126 °C	9.5 % v/v
Autoignition temperature	372 °C
Heat of evaporation at boiling point	347 kJ / kg
Heat of polymerization	655 kJ / kg
Heat of combustion	25476 kJ / kg
Specific heat of liquid at 20°C	1.97 kJ / kg.K
Density of liquid at 20°C	923 kg / m^3
Vapour density (air=1)	3.5
Coefficient of cubic expansion	1.3×10^{-3}
Refractive index at 20°C	1.404 – 1.419
Viscosity at 0°C	0.72 mPa.s
Viscosity at 20°C	0.57 mPa.s
Surface tension at 20°C	26 mN / m
Solubility ester in water	20 g / l
Solubility water in ester	15 g / l
Electrical conductivity	2.1×10^5 pS / m

Shipping and Storage

Ethyl acrylate is transported in specially equipped railway cars or tanker trucks.
Transport containers are filled to a maximum of 92 % of their capacity.

In order to prevent spontaneous polymerization, ethyl acrylate must always be stored in under air, never under inert gases. The air (oxygen) presence is required for a proper functionality of the stabilizer. Product storage temperature must not exceed 35°C. Under these conditions, a storage stability of one year can be expected. It is advisable to minimize the likelihood of ethyl acrylate overstorage by a strict observance of the “first-in-first-out” storage principle. For storage periods extended over one month, it is advisable to replenish the dissolved oxygen content in the product by suitable aeration.

Stainless steel or aluminium is the recommended material for storage tanks and piping. Even though ethyl acrylate does not corrode carbon steel, there is a risk of product contamination if corrosion occurs. All metal made equipment (tanks, pumps, piping etc.) must be earthed.

All national laws and directives, as well as local regulations governing storage, handling, distribution and disposal of flammable liquids must be strictly observed.

Avoid exposure to high temperatures, sparks, flame, light and frost. Keep separated from oxidizing materials. Keep the container tightly closed. For additional detailed information see the brochure „SAFE HANDLING AND STORAGE OF ACRYLIC ESTERS“, issued by the European Basic Acrylic Monomers Manufacturers Association (EBAM).

Product Safety

Please refer to the Safety Data Sheet for safety information.