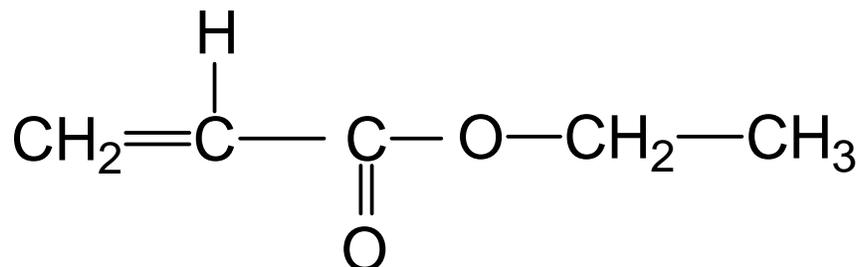


ETHYL ACRYLATE (EA)

Cas number : 140-88-5

EINECS number : 205-438-8

CHEMICAL FORMULA



Molecular weight : 100

OTHER NAMES

Acrylic acid, ethyl ester
2-Propenoic acid, ethyl ester

SPECIFICATIONS

	SPECIFICATION	METHOD
Appearance	Clear liquid	Visual
Colour (APHA)	10 maximum	ASTM D1209
Purity by gas-phase chromatography	99.5 % minimum	GC
Water content	400 ppm maximum	ASTM D1364
Acidity (expressed as acrylic acid)	30 ppm maximum	ASTM D1613
Inhibitor content (MEHQ)*	10 to 20 ppm	ASTM D3125

* For some destinations, inhibitor standard is increased :
Specifications drums: inhibitor (MEHQ) 50 ± 10 ppm
All other properties and specifications remain the same

HANDLING AND SAFETY ADVISES :

We advise you to read carefully the safety data sheet.

Ethyl Acrylate

MAIN PHYSICAL CHARACTERISTICS

Molecular weight	100
Boiling point, at 1013 mbar	100°C
Freezing point	- 72°C
Specific gravity	at 20°C 0.922 at 25°C 0.916
Refractive index, n _D	at 20°C 1.407 at 25°C 1.404
Viscosity	at 20°C 0.56 mPa.s at 25°C 0.530 mPa.s
Solubility	water in EA at 20°C 1.24 g/100 g EA in water at 20°C 1.5 g/100 g
Specific heat in liquid state.....	1.96 kJ/kg°C
Latent heat of vaporisation.....	347 kJ/kg
Heat of polymerisation	777 kJ/kg
Homopolymer glass transition temperature	- 24°C
Flash point	in open cup 9°C in closed cup - 1°C
Lower explosion limit in volume	1.4 %
Vapour pressure	at 20°C 40 mbar at 30°C 67 mbar at 50°C 160 mbar
Auto-ignition temperature.....	399°C

CHEMICAL PROPERTIES

- Addition reaction to the double bond
- Ability to polymerise and copolymerise
- Some specific values for the copolymerisation reactivity ratios r_1 , r_2 ethyl acrylate (M_1) with various monomers (M_2) have been calculated using the Alfred & Price formula :

Styrene.....	$r_1 = 0.41$	$r_2 = 0.85$
Methyl methacrylate ...	$r_1 = 0.67$	$r_2 = 1.32$
Vinyl acetate.....	$r_1 = 18.10$	$r_2 = 0.04$

PACKAGING AND STORAGE

Ethyl Acrylate is delivered :

- in 55 to 60 tons protected ordinary steel rail tankcars
- in 25000 to 32000 litres stainless steel road tankcars
- in 217 litres ordinary steel drums, loaded at 188 Kg.

The standard inhibition is 15 ppm Monomethyl Ether of HydroQuinone (MEHQ).

With this inhibitor, the product should be stored at a temperature of no more than 25°C and away from light.

It must also be stored under air atmosphere, as the presence of oxygen is essential to activate the stabiliser.

Under these conditions, the product is commercial! guaranteed for six months after delivery.

Ethyl acrylate is a highly flammable product, and the usual precautions must be taken in handling it.

USES

Ethyl acrylate is used in the composition of copolymers with a wide range of industrial applications, such as :

- resins and dispersions for non-woven fabrics, textiles and leather
- leaning and waxing products
- synthetic rubbers and lattices
- plastics and synthetic resins
- thickeners
- organic synthesis.

ACRYLIC MONOMERS BU/013568/V6/07.16

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