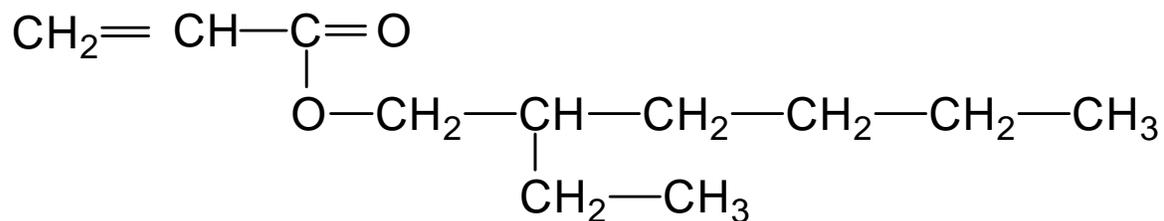


# 2 ETHYLHEXYL ACRYLATE (2EHA)

Cas number : 103-11-7

EINECS number : 203-080-7

## CHEMICAL FORMULA



Molecular weight : 184

## OTHER NAMES

Acrylic acid, 2-ethylhexyl ester  
2-Propenoic acid, 2-ethylhexyl 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)	100 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.

# 2-Ethylhexyl acrylate

## MAIN PHYSICAL CHARACTERISTICS

Molecular weight .....	184
Boiling point, at 1013 mbar .....	213.5°C
Freezing point .....	- 90°C
Specific gravity	at 20°C ..... 0.885 at 25°C ..... 0.880
Refractive index, $n_D$	at 20°C ..... 1.435 at 25°C ..... 1.433
Viscosity	at 20°C ..... 1.67 mPa.s at 25°C ..... 1.52 mPa.s
Solubility water in 2EHA	at 20°C ..... 0.14 g/100 g
2EHA in water	at 20°C ..... 0.1 g/100 g
Specific heat in liquid state .....	1.92 kJ/kg °C
Latent heat of vaporisation.....	234 kJ/kg
Heat of polymerisation .....	329 kJ/kg
Homopolymer glass transition temperature .....	- 70°C
Flash point	in open cup ..... 92°C in closed cup ..... 85°C
Lower explosion limit in volume .....	0.9 %
Vapour pressure	at 20°C ..... < 1 mbar at 30°C ..... < 1 mbar at 50°C ..... 1.6 mbar
Auto-ignition temperature.....	250°C

## CHEMICAL PROPERTIES

- Addition reactions to the double bond
- Ability to polymerise and copolymerise
- Some specific values for the copolymerisation reactivity ratios  $r_1$ ,  $r_2$  of 2-ethylhexyl acrylate ( $M_1$ ) with various monomers ( $M_2$ ) have been calculated using the Alfred & Price formula :

Styrene.....	$r_1 = 0.26$	$r_2 = 0.94$
Methyl methacrylate.....	$r_1 = 0.53$	$r_2 = 1.80$
Vinyl acetate .....	$r_1 = 12.43$	$r_2 = 0.05$

## PACKAGING AND STORAGE

2-Ethylhexyl 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 182 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 commercially guaranteed for six months after delivery.**

2-Ethylhexyl acrylate is a flammable product, and the usual precautions must be taken in handling it.

## USES

- 2-Ethylhexyl acrylate is used in the composition of copolymers, with various industrial applications, such as :
- resins and dispersions for non-woven fabrics, inks, glues and adhesives
  - cleaning and waxing products
  - synthetic rubbers and lattices
  - aqueous dispersions for non-woven fabrics, textiles, paper
  - plastics and synthetic resins
  - additives for fuel oils and lubricating oils.

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