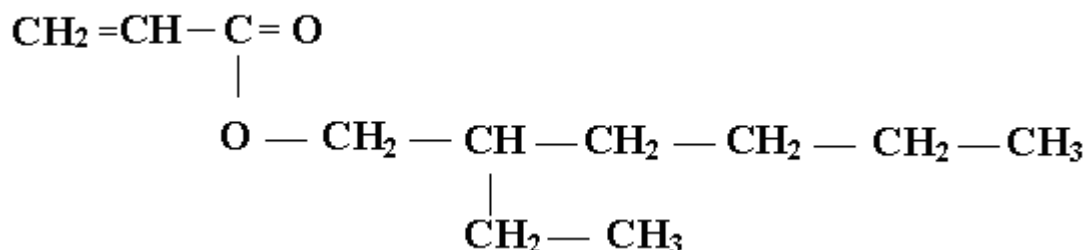


# 2-Ethylhexyl Acrylate (2EHA)

CAS # : 103-11-7

EINECS # : 203-080-7

## CHEMICAL FORMULA



Molecular weight: 184

## OTHER NAMES

Acrylic acid 2-ethylhexyl ester  
2-Propenoic acid, 2-ethylhexyl ester

## SPECIFICATIONS

<u>Characteristic</u>	<u>Test Method</u>	<u>Limit</u>
Purity	GC	99.5 % (min)
Appearance	Visual	C.F.S.M.
Color	ASTM D1209	10 PT-CO (max)
Inhibitor Concentration	ASTM D3125	10 – 20 ppm MEHQ
Water Content	ASTM D1364	400 ppm (max)
Acidity (as Acrylic Acid)	ASTM D1613	100 ppm (max)

# 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 vaporization .....	234 kJ/kg
Heat of polymerization .....	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%
Vapor 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 polymerize and copolymerize.
- Values for the copolymerization reactivity ratios  $r_1$ ,  $r_2$  of 2-ethylhexyl acrylate ( $M_1$ ) with various monomers ( $M_2$ ) have been calculated using the Alfrey & Price formula :

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

## HANDLING AND SAFETY ADVISES

Carefully read the material safety data sheet.

## PACKAGING AND STORAGE

2-Ethylhexyl acrylate is delivered:

- in carbon steel railcars, capacity 90 tons
- in 45,000 pound stainless steel tank trucks
- in 400 pound steel drums

The standard inhibitor level 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 maintain the inhibitor effectiveness.

**Under these storage conditions, the product is commercially guaranteed for six months after delivery.**

2-Ethylhexyl acrylate is a flammable product, and the appropriate 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
- plastics and synthetic resins
- synthetic rubbers and latexes
- aqueous dispersions for non-woven fabrics, textiles and paper
- additives for fuel oils and lubricating oils

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See SDS for Health & Safety Considerations  
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Arkema Inc.  
900 1st Avenue, King of Prussia, PA 19406  
Tel.: (610) 205-7000  
arkema-inc.com