# **NORSOCRYL® BA**

# **BUTYL ACRYLATE**

Cas number : 141-32-2 EINECS number : 205-480-7

## CHEMICAL FORMULA

$$CH_2 = CH - C = O$$
  
 $O - CH_2 - CH_2 - CH_2 - CH_3$ 

Molecular weight: 128

### **OTHER NAMES**

Acrylic acid, n-butyl ester 2-Propenoic acid, n-butyl ester

### **SPECIFICATIONS**

	SPECIFICATION	METHOD
Appearance Colour (APHA) Purity by gas-phase chromatography Water content Acidity (expressed as acrylic acid) Inhibitor content (MEHQ)*	Clear liquid 10 maximum 99.5 % minimum 400 ppm maximum 100 ppm maximum 10 to 20 ppm	Visual ASTM D1209 GC ASTM D1364 ASTM D1613 ASTM D3125

<sup>\*</sup> For some destinations, inhibitor standard is increased : Specifications drums: inhibitor (MEHQ) 50  $\pm$  10 ppm All other properties and specifications remain the same

## **HANDLING AND SAFETY ADVISES:**

We advise you to read carefully the safety data sheet.



# **NORSOCRYL® BA**

### MAIN PHYSICAL CHARACTERISTICS

Molecular weight 12			128
Boiling point, at 1013 mbar 14			147°C
Freezing point			64°C
Specific grav	vity		0.898 0.894
Refractive in	idex, n <sub>D</sub>		1.419 1.416
Viscosity			0.900 mPa.s 0.808 mPa.s
Solubility	water in BA BA in water	at 20°Cat 20°C	0.7 g/100 g 0.2 g/100 g
Specific heat in liquid state 1.96 kJ/kg			1.96 kJ/kg°C
Latent heat of vaporisation		n	297 kJ/kg
Heat of polymerisation			604 KJ/kg
Homopolymer glass transition temperature 54°C			
Flash point			48°C 39°C
Lower explosion limit in volume 1.5 %			
Vapour pres	sure	at 30°C	5.3 mbar 10 mbar 29 mbar
Auto-ignition temperature		297°C	

### **CHEMICAL PROPERTIES**

- Addition reactions to the double bond
- Ability to polymerise and copolymerise
- Values for the copolymerisation reactivity ratios  $r_1$ ,  $r_2$  of butyl acrylate (M<sub>1</sub>) with various monomers (M<sub>2</sub>) have been calculated using the Alfred & Price formula

Styrene	$r_1 = 0.07r_2 = 0.45$
Methyl methacrylate	$r_1 = 0.34r_2 = 1.92$
Vinyl acetate	$r_1 = 4.95r_2 = 0.04$

### **PACKAGING AND STORAGE**

Butyl 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 185 Kg.

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

With this inhibitor, the product should be stored indoors 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.

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

#### **USES**

Butyl acrylate is used in the composition of copolymers, with various industrial applications, such as:

- resins and dispersions for paints, varnishes and inks, glues and adhesives
- aqueous dispersions for non-woven fabrics, textiles paper and leather
- cleaning and waxing products
- plastics and synthetic resins
- synthetic rubbers and lattices
- organic synthesis.

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ARKEMA France Acrylics Division
420 rue d'Estienne D'Orves 92700 COLOMBES France

#20 rue d'Estienne D'Orves 92700 COLOMBES Franc www.arkema.com www.norsocryl.com