Methanol

Description

Methanol is the simplest type of alcohol and is known by the chemical formula CH3OH.
Methanol is a light, volatile, colorless and flammable liquid. This substance is very toxic so that swallowing or inhaling it can cause blindness or death. Methanol is used in the production of many final products such as solvents, paints, plastics and antifreeze. Also, methanol is used as fuel in engines in a limited way with internal combustion system. The most use of the methanol production is to produce acetic acid and MTBE formaldehydes.

Properties	Unit	Test Method	Value
Specification			
Purity	wt %	CALCULATED	99.85 MIN.
H2O	wt %	ASTM E 203	0.1 MAX.
Color	APHA	ASTM D 1209	5 MAX.
Carbonisable	APHA	ASTM E 346	5 MAX.
Sp. Gr.@ (20/20 ºC)	---	ASTM D 891	0.792-0.793
Acidity (As CH3-COOH)	wt %	ASTM D 1613	0.003 MAX.
Alkalinity (As NH3)	wt %	ASTM D 1614	0.003 MAX.
Hydrocarbons	---	ASTM D 1722	PASSED TEST
Fe	Wt.ppm	ASTM D 1068	0.05 MAX.
Chloride	Wt.ppm	ASTM D 512 80	0.2 MAX.
Distillation Range	°C	ASTM D 1078	1 MAX.
Permanganate Time	Minutes	ASTM D 1363	50 MAX.
Acetone	wt %	ASTM E 346	0.003 MAX.
Odour	---	ASTM D 1296	Non Residual
Non Volatile Matter	mgr/100ml	ASTM D 1353	2 MAX.
Appearance	---	-	Clear Free From Suapended Matter
Miscibility	---	ASTM D 1722	Passes Test

Butyl Acrylate

Description

Butyl acrylate is a flammable, colorless and transparent liquid that mixes easily in organic solvents.

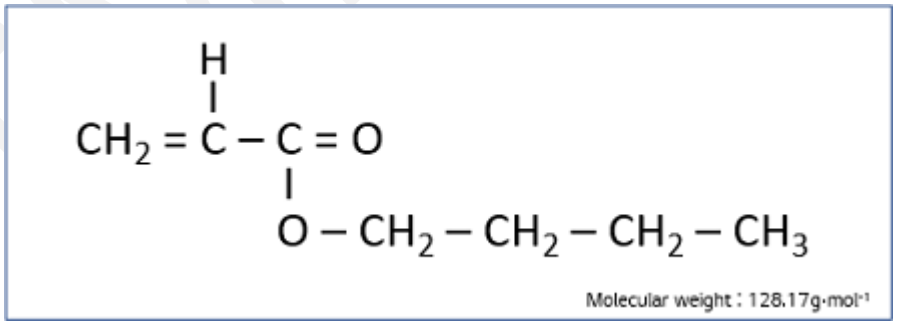
Depending on the monomer selection and chemical reaction conditions, various physical properties can be realized after polymerization.

Properties	Unit	Butyl Acrylate	Method
Specification			
Purity	wt %	≥99.5	Gas chromato.
Color	APHA	≤10	ASTM D1209
Water Content	wt %	≤0.05	ASTM D1364
Inhibitor	wt ppm	10~20	ASTM D3125
Acidity	wt ppm	≤50	ASTM D 1613
Specific Gravity	20/4℃	0.896~0.901	ASTM D1298
Typical Properties			
Boiling Point	℃	147	
Freezing Point	℃	-64	
Refractive Index	nD	1.419	25℃
Heat Capacity	cal/g℃	0.468	20℃
Heat of Polymerization	cal/g	120.4	
Solubility in Aqueous	wt %	0.2	25℃
Solubility aq. in subs	wt %	0.7	25℃
Homopolymer Tg	℃	-54	

Summary

Synonym :
Acrylic acid n-butyl ester
2-Propenoic acid,butyl ester
CAS No : 141-32-1
EINECS No : 205-480-7

Chemical Formula



Note

Butyl acrylate is used in the composition of copolymers with various industrial applications.

- Resins and dispersions for paints, varnishes and inks, glues, pressure sensitive adhesives

Emulsion polymers or dispersions for non-woven fabrics, textiles, paper, leather

- Cleaning and floor waxing products
- Plastics and synthetic resins, ,synthetic rubbers and latexes

Butyl acrylate is able to addition reaction to the double bond and to polymerize and copolymerize.
Some copolymer reactivity ratios r1, r2 of Butyl acrylate (M1) with various monomers (M2) was calculated from the Alfred & Price equation. Styrene : r1 = 0.07 r2 = 0.45
Methyl methacrylate : r1 = 0.34 r2 = 1.92 Vinyl
acetate : r1 = 4.95 r2 = 0.04

Precaution

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 35 °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. Butyl acrylate is a flammable product, and the appropriate precautions must be taken in handling it.
For more information, please refer a material safety data sheet.

Package

Butyl acrylate is delivered:

- 20MT with ISO tank
- 180Kg with steel drum