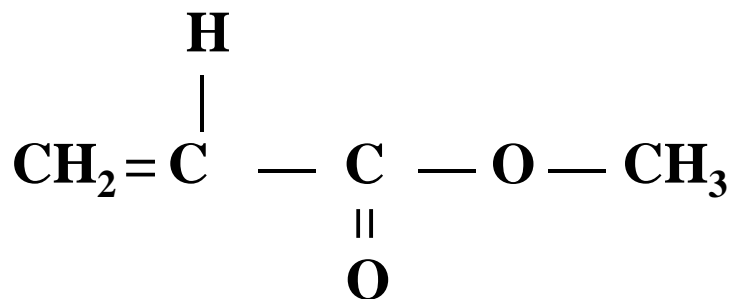


Methyl Acrylate (MA)

CAS # : 96-33-3

EINECS # : 202-500-6

CHEMICAL FORMULA



Molecular weight: 86

OTHER NAMES

Acrylic acid methyl ester
2-Propenoic acid, methyl 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	500 ppm (max)
Acidity (as Acrylic Acid)	ASTM D1613	90 ppm (max)

Methyl Acrylate

MAIN PHYSICAL CHARACTERISTICS

Molecular weight	.....	86
Boiling point, at 1013 mbar	.....	80°C
Freezing point	.....	-75°C
Specific gravity	at 20°C .....0.956 at 25°C .....0.950	
Refractive index, n _D	at 20°C .....1.403 at 25°C .....1.400	
Viscosity	at 20°C .....0.489 mPa.s at 25°C .....0.461 mPa.s	
Solubility	water in MA at 20°C 2.5 g/ 100 g MA in water at 20°C 5.2 g/100 g	
Specific heat in liquid state	.....	2.01 kJ/kg°C
Latent heat of vaporization	.....	384 kJ/kg
Heat of polymerization	.....	914 kJ/kg
Homopolymer glass transition temperature	.....	10°C
Flash point	in open cup 3°C in closed cup -2°C	
Lower explosion limit in volume	.....	2.8%
Vapor pressure	at 20°C .....91 mbar at 30°C .....147 mbar at 50°C .....346 mbar	
Auto-ignition temperature	.....	463°C

CHEMICAL PROPERTIES

- Addition reactions to the double bonds.
- Ability to polymerize and copolymerize.
- Values for the copolymerization reactivity ratios r_1 , r_2 of methyl acrylate (M_1) with various monomers (M_2) have been calculated using the Alfrey & Price formula:

Styrene	.....	$r_1 = 0.14$	$r_2 = 0.78$
Methyl methacrylate	...	$r_1 = 0.50$	$r_2 = 1.91$
Vinyl acetate	.....	$r_1 = 9.98$	$r_2 = 0.05$

HANDLING AND SAFETY ADVISES

Carefully read the material safety data sheet.

PACKAGING AND STORAGE

Methyl 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 conditions, the product is commercially guaranteed for three months after delivery.

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

USES

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

- acrylic and modacrylic fibers
- resins and dispersions for paints, varnishes and inks, glues and adhesives
- aqueous dispersions for non-woven fabrics, textiles and paper
- cleaning and waxing products
- plastic and synthetic resins
- synthetic rubbers and latexes
- organic synthesis

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.

See SDS for Health & Safety Considerations
© 2016 Arkema Inc. All rights reserved.



Arkema Inc.
900 1st Avenue, King of Prussia, PA 19406
Tel.: (610) 205-7000
arkema-inc.com