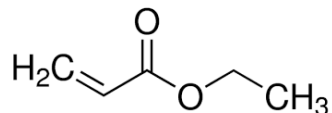




Ethyl Acrylate, EA

Acrylic acid ethyl ester, Ethyl propenoate



Introduction

Ethyl Acrylate (EA) is a clear, colorless liquid with a strong acrid odor. It's comprised of a polymerizable vinyl functional group on one end and a reactive ester group on the other end. It is slightly miscible with water, soluble in most organic solvents and has relatively low volatility. It's vapor is heavier than air. Ethyl Acrylate copolymerizes readily with a wide variety of functional groups including amides, esters, vinyl acetate, vinyl chlorides, styrene and (meth)acrylic acid. The added ester group imparts properties such as durability, flexibility, elasticity, stickiness and adhesiveness.

Applications

Ethyl Acrylate can be homopolymerized into PolyEA or co-polymerized with ethylene to form Ethylene-EA co-polymers which can be used to form a variety of latexes. These products exhibit high flexibility, good adhesiveness and elasticity.

PolyEA and used in a variety of block polymerizations. Polymers containing EA exhibit the following characteristics.

- Mechanical strength, flexibility, durability, elasticity
- Weather resistance, moisture resistance
- Crosslinking sites, ester group reacts readily with amides, esters and styrenics.
- Low volatility and low odor.
- Ethyl Acrylate monomer is also used in the manufacture of inks, resins, caulks, adhesives, sealants, fibers, leather, rubber and denture materials.

Physical Properties

Property	Value
Formula weight	100.117
Appearance	Clear, colorless liquid
Odor	Strong ester, acrid odor
Specific gravity at 20 °C	0.923
Refractive index at 25 °C	1.407
Viscosity, cps at 35 °C	0.742
Boiling point at 760 mmHg	99.4 °C
Freezing point	-71 °C
Solubility in water	Slightly Soluble
Flash point, °C	15
Tg of homopolymer, °C	-23
Vapor Pressure at 20 °C	29.3mm
Vapor Density, (air=1)	3.45
Autoignition Temperature, °C	372

Typical Composition

Property	Standard Specification	Typical Value
EA Assay	99.5% Min	99.92 wt%
MEHQ 15, 50, 100ppm	10 – 20, 45 – 55, 90 – 110ppm	Target
Water	0.05% Max	0.02%
Color	10 Max	4
Acidity as Acrylic Acid	0.009% Max	0.001%

Handling Precautions

Before using this product, consult the Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

Storage

Consult the Safety Data Sheet (SDS). The monomer shelf life informs how long the material will remain stable under normal conditions. Never store expired material.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area. For further information, please see our website, dow.com or consult your local Dow representative.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

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