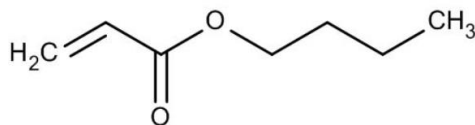




Butyl Acrylate, BA

Acrylic acid butyl ester, Butyl prop-2-enoate



Introduction

Butyl Acrylate (BA) is a clear, colorless liquid with a sharp, pungent 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. Butyl Acrylate copolymerizes readily with ethylene, styrene, vinyl acetate and (meth)acrylic acid. The added ester group imparts good low temperature properties such as durability, flexibility, elasticity, and adhesiveness.

Applications

Butyl Acrylate can be homopolymerized into PolyBA or co-polymerized with ethylene to form Ethylene-BA co- polymers which can be used to form a variety of thermoplastics as impact modifiers. These products exhibit high flexibility, good adhesiveness and photostability. PolyBA is a tough, leathery and flexible and polymers containing BA exhibit the following characteristics.

- Mechanical strength, flexibility, durability, elasticity, low volatility, low odor
- Weather resistance, moisture resistance, UV resistance
- Crosslinking sites, can be copolymerized with other acrylates
- Butyl Acrylate monomer is also used in the manufacture of inks, resins, caulks, adhesives, sealants, fibers, leather and packaging materials.

Physical Properties

Property	Value
Formula weight	128.2
Appearance	Clear, colorless liquid
Odor	Strong ester, pungent, fruity odor
Specific gravity at 25 °C	0.894
Refractive index at 25 °C	1.416
Viscosity, cps at 25 °C	0.808
Boiling point at 760 mmHg	147 °C
Freezing point	-64 °C
Solubility in water	Slightly Soluble
Flash point, °C	105
Tg of homopolymer, °C	-45
Vapor Pressure, mm at 20 °C	3.97
Vapor Density, (air=1)	>1
Autoignition Temperature, °C	292 °C

Typical Composition

Property	Standard Specification	Typical Value
BA Assay	99.50% Min	99.70 wt%
MEHQ 15, 50, 105 ppm	10 – 20, 45-55, 90-120 ppm	Target
Water	0.05% Max	0.01%
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

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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