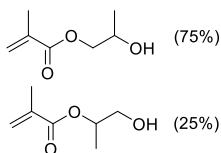




Product Data Sheet

ROCRYL™ 410 Hydroxypropyl Methacrylate (HPMA)



Introduction

ROCRYL™ 410, also known as hydroxypropyl methacrylate (HPMA), is a clear colorless, easily flowable liquid monomer with a pungent, sweet odor. It comprises of a polymerizable methacrylate functional group in one end and a reactive hydroxyl group at the other end. It easily dissolves in water and has relatively low volatility. It copolymerizes readily with a wide variety of monomers, and the added hydroxyl groups improve adhesion to surfaces, incorporate cross-link sites, and impart corrosion, fogging, and abrasion resistance, as well as contribute to low odor, color, and volatility.

Applications

ROCRYL™ 410 copolymerizes readily with a wide variety of monomers. The resulting polymer chains bear pendent hydroxyls that impart the following important properties to the polymer products.

- Hydrophilicity
- Improved adhesion to substrates
- Crosslinking sites, free hydroxy group reacts readily with isocyanate, anhydrides and epoxy resins
- Corrosion, fogging, and abrasion resistance, as well as contribute to low odor, color, and volatility

ROCRYL™ 410 monomer is used in the manufacture of acrylic polyols, caprolactone monomers, printing plates, and finish coatings for motor vehicles, appliances, and metals. Other end uses include adhesives, sealants, and binders.

Physical Properties

Property	Value
Formula weight	144.2
Appearance	Clear liquid
Odor	Pungent, sweet odor
Specific gravity at 25 °C	1.030
Refractive index at 25 °C	1.4447
Viscosity, cps at 20 °C	7.4
Boiling point at 760 mmHg	209 °C
Freezing point	< -90 °C
Solubility in water	Miscible
T _g of homopolymer	73 °C

Typical Composition

Property	Typical Value
HPMA assay	99.0 wt%
Propylene glycol dimethacrylate (PGDMA)	0.08 wt%
MeHQ	300 ppm
Acidity	0.03 wt%
Water	0.04 wt%
Color (APHA)	10

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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