



**SPECIALTY  
METHACRYLATES**

**VISIOMER®**

# Creating possibilities for a sustainable world.

Methacrylate monomers are among the most versatile and efficient building blocks of macromolecular chemistry. VISIOMER® Specialty Methacrylates serve a broad range of industries and applications and enable individual and sustainable effects for your products in the field of adhesives, paints and coatings, composite resins, construction materials as well as various special applications.

Working in close partnership with our customers we go beyond existing technologies, cooperating closely to develop customized and innovative solutions for replacing hazardous or harmful substances, facilitating weight reduction in construction materials and reducing carbon footprint, all to make your products more environmentally friendly, efficient and long lasting.

Outstanding solutions arise from mutual inspiration, so we enthusiastically invite our customers to join our sustainability journey—**Creating possibilities for a sustainable world.**

Our VISIOMER® ToolBox describes the entire range of Specialty Methacrylate monomers, complemented by technical information, Life Cycle Assessments, Safety Data Sheets, and more to support your product development activities from early design to high performing finished products and beyond.

**For more details please visit our VISIOMER® ToolBox on [www.visiomer.com](http://www.visiomer.com) or get in touch with us under: [visiomer@evonik.com](mailto:visiomer@evonik.com)**



## COATINGS



**VISIOMER® methacrylates provide coatings with outstanding performance and make your resin partially biorenewable.**

### Automotive Coatings

**VISIOMER® Terra IBOMA** provides weather- and scratch resistance to solvent borne (SB) coatings and allows for reduction of solvent content without compromising levelling and gloss. Resins with VISIOMER® IBOMA show fast physical drying and contribute to carbon footprint reduction of your paints.

### Protective Coatings

**VISIOMER® HEMA-P 70 M** enables superior adhesion to polar surfaces like minerals, glass, and metals. In direct to metal coatings, VISIOMER® HEMA-P 70 M enhances corrosion resistance.

### Benefits

- Excellent weather- and scratch resistance
- SB coatings with low VOC, fast physical drying and outstanding leveling and gloss
- Excellent adhesion and corrosion resistance



**VISIOMER® methacrylates take shear stability, usability and performance of emulsion paints to a higher level.**

### Architectural Coatings

**VISIOMER® MPEG 750 MA W** and **VISIOMER® MPEG 1005 MA W** provide water borne paints with excellent low temperature stability against agglomeration.

**VISIOMER® MPEG 500 MA** is a water- and label free polymerizable surfactant, that can be used for secondary dispersions and as pigment dispersant.

**VISIOMER® MEEU** improves paint adhesion and wet scrub resistance of wood coatings.

**VISIOMER® C18 PEG 1105 MA W** promotes associative thickening for better sag control.

**VISIOMER® Terra C13-MA** and **VISIOMER® Terra C17,4-MA** enhance hydrophobicity of emulsion paints, strengthen resin resistance against polar media and reduce their carbon footprint.

### Benefits

- Excellent shear stability, viscosity control and adhesion of emulsion paints to a variety of substrates
- Higher resistance against polar chemicals
- Resins with low carbon footprint

## ADHESIVES



**VISIOMER® methacrylate monomers are used in reactive two-component adhesive and sealant formulations. Most popular are anaerobic or structural adhesives, based on methacrylates. Emulsion polymers for pressure-sensitive adhesives and sealants also contain VISIOMER®.**

### Selected Solutions

**VISIOMER® Terra IBOMA, VISIOMER® BNMA and VISIOMER® c-HMA** are used in combination with VISIOMER® crosslinkers for the formulation of structural adhesives with low hazard potential and low vapor pressure.

**VISIOMER® MEEU** is used to improve adhesion and cohesion of emulsion polymers for PSAs.

### Benefits

- Enhanced cohesive strength and resistance
- Formulation components with low hazard potential
- Increased adhesion to polar surfaces

## COMPOSITE RESINS



**Evonik's methacrylates Business Line offers a wide range of low-volatile and low-odor methacrylate monomers for full or partial substitution of styrene in composite resins. They are used as reactive diluents or cross-linkers in unsaturated polyester resin (UPR) or vinyl ester formulations.**

### Selected Solutions

**VISIOMER® 1,4-BDDMA, VISIOMER® EGDMA and VISIOMER® PEG 200 DMA** are used as reactive diluents to improve mechanical properties.

**VISIOMER® HEMA-P** improves adhesion to glass fibers and flame retardancy in composite resins.

### Benefits

- Low-odor, reactive diluents
- Improved mechanical properties
- Superior adhesion
- Flame retardancy

## CONSTRUCTION



Acrylic materials based on methacrylate monomers are proven solutions in the construction industry. In applications like industrial flooring, reactive road markings, liquid water proofing systems, concrete admixtures and chemical anchoring, methacrylates are easy to process and cure rapidly even at low temperatures.

### Selected Solutions

Formulations of water soluble **VISIOMER® MPEG MAs** and **VISIOMER® DMAPMA** with hydrophilic crosslinkers like **VISIOMER® PEG 200 DMA** are well established as injection gels.

**VISIOMER® MPEG MAs** are important building blocks for the synthesis of super plasticizers for concrete admixture systems.

**VISIOMER® 1,4-BDDMA**, **VISIOMER® TRGDMA** and **VISIOMER® PEG 200 DMA** are used for chemical anchoring.

### Benefits

- Fast curing, even at low temperatures
- Low-odor, reactive diluent
- Chemical stability

## SELECTED SOLUTIONS FOR SPECIAL APPLICATIONS



Methacrylates are versatile monomers used in many different application areas. Due to their properties ranging from very hydrophilic to hydrophobic, and imparting  $T_g$ s from  $-70\text{ }^\circ\text{C}$  up to  $150\text{ }^\circ\text{C}$ , **VISIOMER®** specialty methacrylates offer the opportunity to tune resin properties and to impart special functionality.

### Electrical Insulation Varnishes

**VISIOMER® 1,4-BDDMA** and **VISIOMER® TMPTMA** are used as reactive diluents for electrical insulation varnishes.

### Surfactants & Thickeners

**VISIOMER® MPEG MAs** are used as polymerizable surfactants in emulsion polymerization or as comonomers of polymeric surfactants.

**VISIOMER® C18 PEG 1105 MA W** is a specialty methacrylate for the synthesis of associative thickeners for emulsion paints.

### 3D printing

**VISIOMER® HEMATMDI**, **VISIOMER® TRGDMA** and **VISIOMER® PEG 200 DMA** are used in dental compounds, adhesives for dental applications and for 3D printed aligners.

### Benefits

- Tunable resin properties by functional comonomers
- Crosslinkers for improved mechanical and chemical resistance

## VISIOMER® TERRA — SUSTAINABLE PERFORMANCE WITHOUT COMPROMISE

Customers and formulators are switching to more sustainable materials, demanding uncompromising products with reduced carbon footprints and improved safety profiles – supported by a supply chain strategy that is there when you need it, today and for the sustainable future.

At Evonik, these questions drive our scientists to create products that are meeting tomorrow’s market needs for high performing, sustainable monomers.

**VISIOMER®** biobased specialty methacrylate monomers from Evonik offer outstanding performance from an established partner you can trust.



**VISIOMER® biobased  
specialty methacrylate  
monomers**

A growing number of resins for coatings, personal care, adhesives, composites, construction and more already benefit from **VISIOMER® Terra** monomers.

For more than a decade, Evonik has produced monomers made from up to 85% biobased and recycled raw materials under the growing **VISIOMER® Terra** brand, part of our long-term strategy to protect the environment and mitigate climate change without compromising performance. **VISIOMER® Terra** biobased monomers must not only meet the highest performance requirements, they must also have a low hazard potential and be designed for environmental friendliness. Increasing adoption rates mean that prices are becoming increasingly affordable, too.



The bio-content of **VISIOMER® Terra** products is independently certified by [DIN CERTCO](#), registration number 8C284.

Additional Life Cycle Assessments provide a comprehensive data set you can use to confirm the beneficial effects of **VISIOMER® Terra** biobased monomers in your products.

**Changing performance demands means our portfolio of biobased monomers keeps expanding. Talk to Evonik about what we can do for you.**



**VISIOMER® Terra products surpass the properties of biobased methacrylates with respect to the following criteria:**

- Bio-Carbon content of up to 85 %
- Bio-Carbon content verified and certified by independent third party
- No severe health or environmental hazards
- Life Cycle Analysis data available

Product		Bio-carbon content
VISIOMER® Terra IBOMA		71%
VISIOMER® Terra C13-MA		76%
VISIOMER® Terra C17,4-MA		81%

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