RÖHM

TRADITIONALLY
INNOVATIVE

MERACRYL™ METHACRYLATE MONOMERS

YOUR PERSONAL PARTNER FOR
A SEAMLESS WORKFLOW.

RÖHM –
TRADITIONALLY INNOVATIVE

With 3,900 employees and 15 production sites worldwide, Röhm is one of the world's leading manufacturers in the methacrylate business. The medium-sized company with branches in Germany, China, the USA, Russia, and South Africa has more than 80 years of experience in methacrylate chemistry and a strong technology platform. More information is available at www.roehm.com.

We are close to our customers and markets. As one of the world's leading partners in quality and reliability, we are committed to defining the methacrylate markets of tomorrow together with our customers. Our strategic goal is clear—to become the leading Methacrylate Verbund.

Our global presence makes us a reliable partner developing the right solutions together with our customers. The structure of an integrated production network gives us the flexibility to quickly respond to our customers' needs.

For this we build on decades of experience in the field of methacrylate chemistry. At the same time, we are further expanding our technology-based strengths in the integrated production network and are continuously developing new fields of application with our products.

WE ARE GLOBALLY PRESENT –
CLOSE TO MARKETS AND CUSTOMERS

15 PRODUCTION SITES
ON **4** CONTINENTS
SALES IN >**100** COUNTRIES

MERACRYL™ METHACRYLATE MONOMERS – YOUR PERSONAL PARTNER FOR A SEAMLESS WORKFLOW

More than 80 years of expertise in methacrylate monomers
In 1901, Dr. Otto Röhm, a pioneer in methacrylate chemistry, paved the way for a longstanding tradition of innovation. With large-scale industrial production of methacrylate monomers and polymers already on the rise in the 1930s, Röhm developed into a leading supplier for methacrylates globally.

Röhm's global trademark for methacrylate monomers, MERACRYL™, stands for high-quality products, supply reliability and excellent customer service. With our global production network including 4 plants in Germany, USA and China and continuous investment in plant safety, material availability and efficiency enhancements, we ensure high reliability of supply worldwide.

OUR COMMITMENT TO OUR CUSTOMERS

Long-term partnership with our customers on a global scale

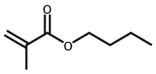
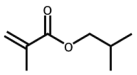
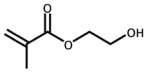
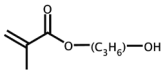
Excellent customer service in all core regions

Reliable and cost-efficient supply chain on a global basis

High production reliability and technology leadership

High product quality and strong technical expertise

THE MERACRYL™
METHACRYLATE MONOMER PORTFOLIO

MERACRYL™ product	Chemical name	Formula	Molecular weight g/mol	Boiling point °C/hPa	Glass transition temperature Tg °C	Standard stabilization ppm MEHQ [3]
MMA	Methyl methacrylate	 CAS No. 80-62-6	100.1	100/1013	105	100±10
GMAA	Methacrylic acid	 CAS No. 79-41-4	86.1	162/1013	185	200±20
n-BMA	n-Butyl methacrylate	 CAS No. 97-88-1	142.2	163/1013	20	100±10
i-BMA	i-Butyl methacrylate	 CAS No. 97-86-9	142.2	155/1013	53	100±10
HEMA	2-Hydroxyethyl methacrylate	 CAS No. 868-77-9	130.1	213/1013	55	200±20
HPMA	Hydroxypropyl methacrylate	 CAS No. 27813-02-1	144.2	209/1013	73	200±20
MAAmide	Methacrylamide	 CAS No. 79-39-0	85.1	app. 225/1013	250	–
ACH[1]	Acetone cyanohydrin	 CAS No. 75-86-5	85.1	82/31	–	1000–3000 [2]

[1] Europe only [2] Sulfuric acid [3] Other stabilizer types and concentration levels on request

MERACRYL™ MONOMERS – PROPERTIES AND APPLICATIONS

Methacrylate monomers are used in the production and modification of a wide variety of polymers – such as cast sheet, methacrylate molding compounds, artificial marble or PVC modifiers.

MERACRYL™ MMA, n-BMA and i-BMA are also used as building blocks in a broad range of applications, such as paints & coatings, reactive resins, adhesives and many others. These monomers provide very good exterior durability and color stability.

MERACRYL™ MMA, which has a glass transition temperature of 105°C, is used wherever hardness and thermo-mechanical stability is needed.

MERACRYL™ n-BMA and i-BMA provide flexibility due to softening temperature of 20°C and 53°C.

MERACRYL™ GMAA is used as building block in applications like paints, dispersions or construction chemicals. It confers specific properties, such as improved freeze-thaw resistance, colloidal stability in emulsion, and enhanced film adhesion.

Hydroxyesters are recommended for heat or room temperature cured coatings with permanent marring and solvent resistance, high gloss retention and weatherability. Hydroxyfunctional prepolymers, for example, can be crosslinked via melamine resins, blocked isocyanates (one-component systems), or multifunctional isocyanates (two-component systems). Hydroxyesters also serve as adhesion promoters in reactive resins for bonding to metal surfaces.

Combinations of methacrylamide and acetal-modified methacrylamides are recommended for heat-activated self-crosslinking resins. MERACRYL™ MAAmide alone can be used as a polar co-monomer with a high glass transition temperature for improving solvent resistance and cohesion. For specific applications, methacrylamide can be grafted onto natural fibers (silk weighting).

THE MERACRYL™
METHACRYLATE MONOMER PORTFOLIO

MERACRYL™ PRODUCT APPLICATION MATRIX

		MMA	GMAA	n-BMA	i-BMA	HEMA	HPMA	MAAmide	ACH
1.	**PAINTS & COATINGS**								
1.1	Solvent borne coatings	●	●	●	●				
1.2	Water borne coatings	●	●	●	●			●	
1.3	Reactive coatings (e.g. OEM, Industrial)*	●	●	●	●	●	●		
2.	**EMULSIONS**								
2.1	Latex polymers	●	●	●	●			●	
2.2	Core shell emulsions	●	●	●	●	●	●	●	
2.3	Crosslinkable emulsion polymers	●	●	●	●	●	●	●	
2.4	Physical cross-linking		●					●	
2.5	Colloidal stability		●						
3.	**REACTIVE SYSTEMS**								
3.1	Reactive adhesives and sealants	●	●	●	●	●	●		
3.2	Photopolymer plates and photoresists	●	●			●	●		
3.3	Additives for PVC plastisols		●					●	
3.4	Methacrylate based plastisols	●	●	●	●	●	●	●	
3.5	Chemical fixing					●	●		
4.	**PLASTICS**								
4.1	Acrylic sheet/molding compounds	●						●	
4.2	Modifiers and processing aids	●		●					
4.3	Rubber additives		●						
5.	**COMPOSITES**								
5.1	Artificial marble/solid surface	●							
5.2	UPR/VER	●	●			●	●		
5.3	Fiber bonding		●						

MERACRYL™ PRODUCT APPLICATION MATRIX

		MMA	GMAA	n-BMA	i-BMA	HEMA	HPMA	MAAmide	ACH
6.	**CONSTRUCTION**								
6.1	Concrete additives	●	●	●	●	●	●	●	
6.2	Chemical anchoring	●					●		
6.3	Sealants	●		●		●	●		
6.4	Flooring	●							
6.5	Road marking	●		●	●				
7.	**PERFORMANCE PRODUCTS**								
7.1	Silk grafting							●	
7.2	Textile coating/fiber bonding	●	●			●	●	●	
7.3	Oil and gas applications	●	●						
7.4	Emulsifiers, dispersants & thickeners		●						
7.5	Floor care products	●	●	●	●	●	●		
8.	**HEALTH & PERSONAL CARE**								
8.1	Dental compounds	●		●	●				
8.2	Cosmetics							●	
8.3	Contact lenses					●	●		
8.4	Pharmaceutical applications	●	●						●
9.	**PAPER & WATER**								
9.1	Flocculants	●	●					●	
9.2	Retention and dewatering aids	●							
9.3	Sizing additives	●	●	●	●				
10.	**INTERMEDIATES FOR SYNTHESIS**								
10.1	Building blocks								●

*Can be both solvent and water borne

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