

VISIONER® MPEG 500 MA
Delivered in Pure Form
(100 % solids, no water)

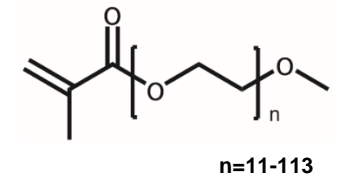


VISIOMER® Methoxy Polyethylene Glycol Methacrylates (MPEGMA)

VISIOMER®	MPEG500MA	MPEG750MAW	MPEG1005MAW	MPEG2005MAW	MPEG5005MAW
Mw	~ 568 g/mol	~ 818 g/mol	~ 1000 g/mol	~ 2000 g/mol	~ 5000 g/mol
Acid content	max. 0,4%	max. 0,2%	max. 10.7%	max. 4.9%	max. 3.1%
Water content	max. 0,5% water free !	50% ± 2%	50% ± 2%	50% ± 2%	50% ± 2%
Stabilization HQME	200 ± 20 ppm	200 ± 20 ppm	200 ± 20 ppm	200 ± 20 ppm	200 ± 20 ppm

Short chain MPEG MAs

Long chain MPEG MAs

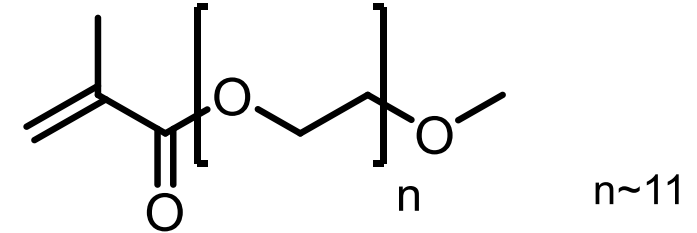


Characteristic properties:

- MPEG MAs from short to very long PEG chains
- Low OH number & high functionality
- High purity, low crosslinker content
- Low acid value
- Low color
- Label-free

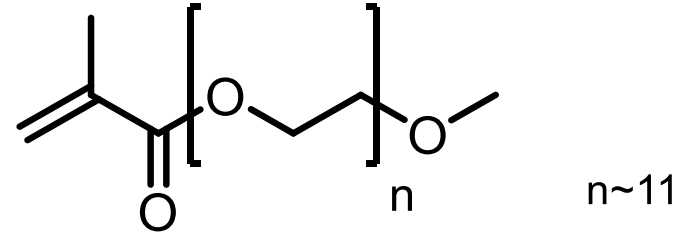
VISIOMER® MPEG 500 MA - Key Features

- monofunctional polyethylene glycol methacrylate
- short PEG chain
- supplied pure
(not in aqueous solution like other VISIOMER® MPEG MAs)
- low acid content (max. 0.4%)
- no label



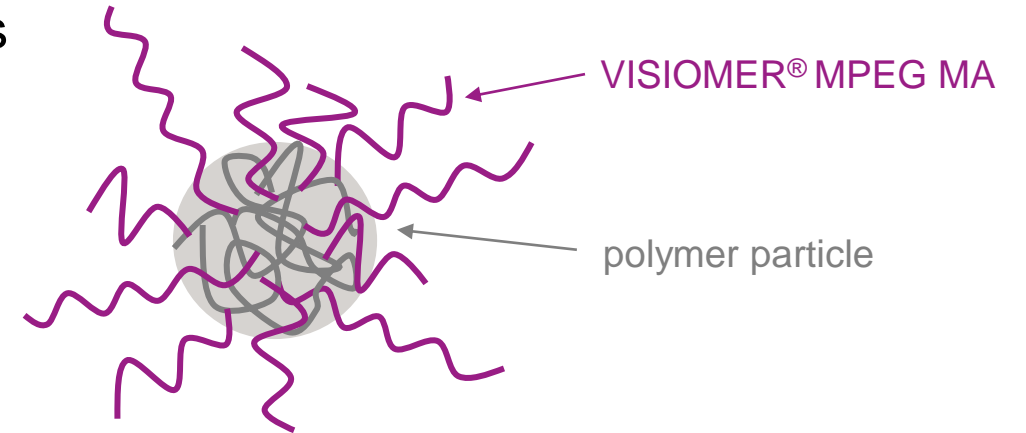
VISIONER® MPEG 500 MA - Key Applications

- polymerizable surfactant, e.g., in secondary dispersions
- reactive (pigment) dispersant
- co-monomer for polymeric dispersants
- co-monomer for reactive resin application and in all types of radical polymerizations
- improves freeze-thaw stability of polymeric dispersions (like MPEG750MA)



VISIOMER® MPEG Methacrylates as Polymerizable Surfactants

VISIOMER® MPEG 500 MA, MPEG 750 MA W and MPEG 1005 MA W are used as polymerizable surfactants

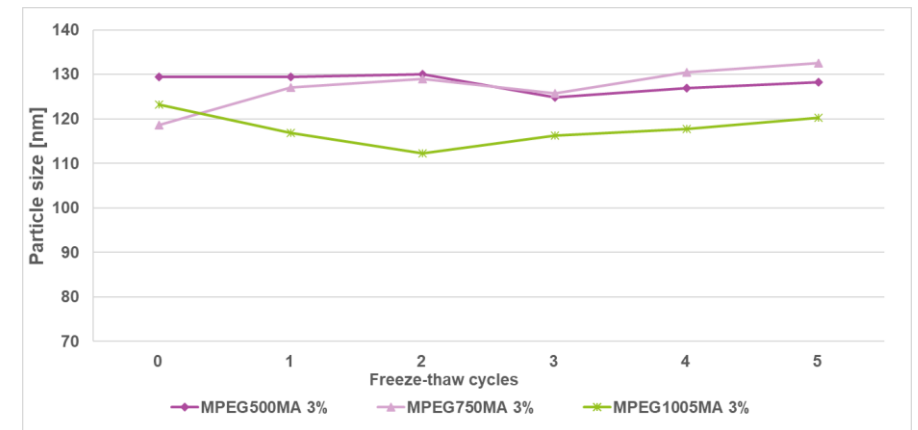
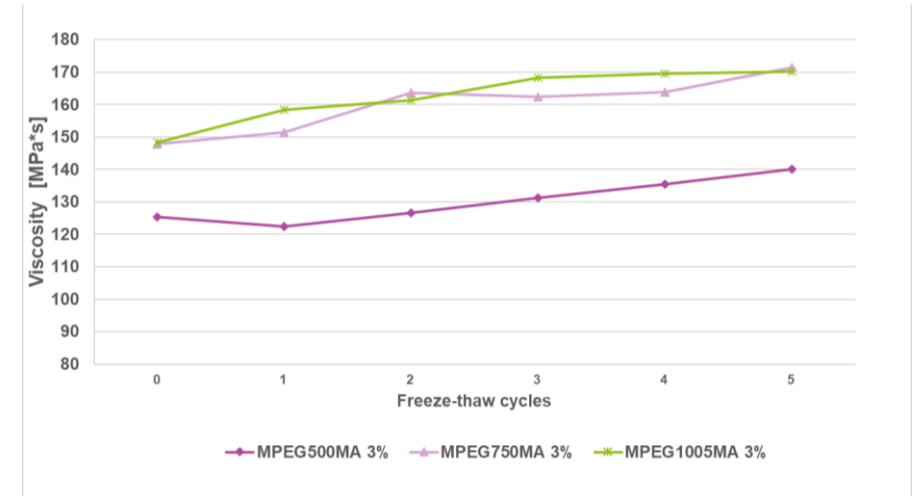


- Very high polarity
- Excellent solubility in water
- VISIOMER® MPEG Methacrylates as polymerizable surfactants
- Improved freeze-thaw stability of polymer dispersions

VISIOMER® MPEG Methacrylates – Freeze-Thaw Stability

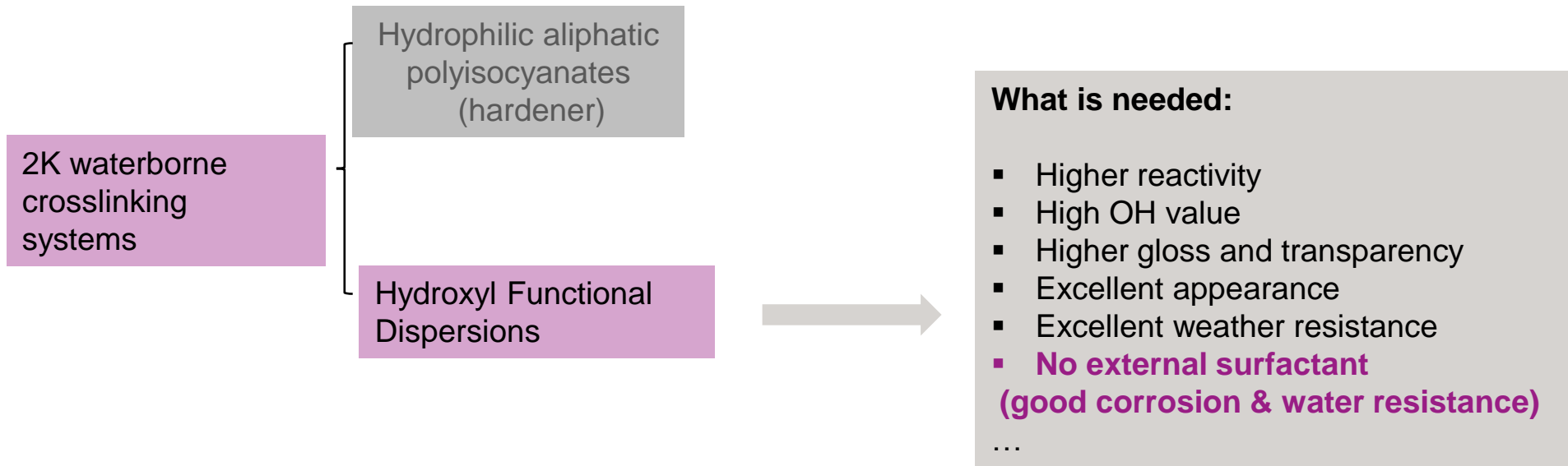
Emulsions containing either VISIOMER® MPEG 500 MA, MPEG 750 MA or MPEG 1005 MA show good freeze-thaw stability:

- Emulsions still showed acceptable viscosities and remained in good condition after five freeze-thaw cycles. The commercial samples* all phase separated and disintegrated after one test cycle.
- The particle size of the emulsions remained constant over all five freeze-thaw cycles.



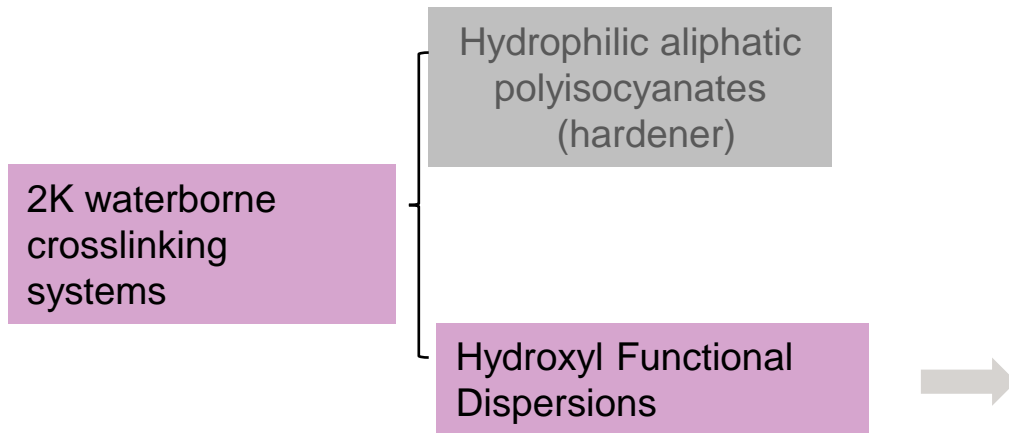
Application Area Industrial Coatings: 2K Waterborne PU Systems

Mostly, hydroxyl functional (-OH) acrylic dispersion is one component in 2K waterborne (WB) polyurethane systems (combine with polyisocyanates)



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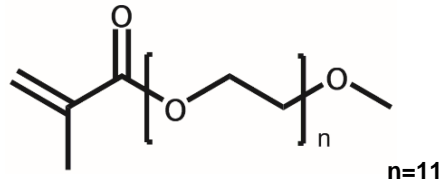
Visiomer® Monomers	Effect
MMA, n-BMA, GMAA	Main monomers Provide -COOH group, help to disperse in water
HEMA, HPMA	Provide -OH group, react with polyisocyanates
MAAmide	Better mechanical properties
IBOMA	High solid low viscosity decrease solvent
LACE monomers (IDMA, C13MA, etc)	Water resistance/anti-blocking
Methacrylate phosphate	Anti-corrosion
MEEU 25 M	Adhesion to the substrate
MPEG MA (water free)	Internal surfactant

VISIOMER® MPEG Methacrylates in Concrete Applications

Short chain MPEGs for acrylic concrete grouting superplasticizers

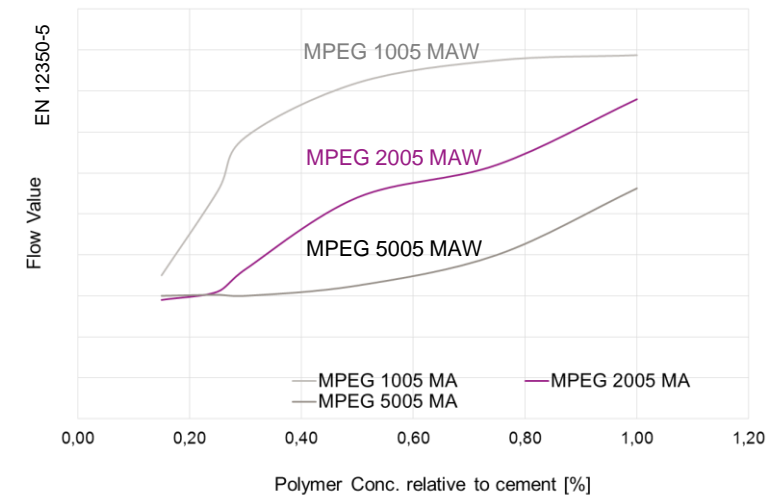
Short chain MPEG MAs have a high polarity and excellent water solubility. Along with polar crosslinkers they are used in fast curing cementitious sealants for water proofing.

VISIOMER® MPEG500MA



Long chain MPEGMA for

Copolymers of long chain MPEG MAs improve the flow of concrete mixtures and are used as superplasticizers.



VISIOMER® MPEG 500 MA Standard Specification

Standard specification

		Test Method	
Degree of purity	> 95 %	M2-233	(GC)
Acid content	max. 0,40 %	M4	(acid-base titr., calculated as GMAA)
Water content	max. 0,50 %	M3	(according to K. Fischer)
Stabilization	200 ± 20 ppm MEHQ	M1-1	(HPLC)

VISIOMER® MPEG 500 MA Physical Data / Storage

Physical Data

Molecular weight	~ 568 g/mol
Density	1.090 g/cm ³ at 20 °C
Refractive index	1.462 at 20 °C
Solidification point	12 °C
Viscosity	64 mPa·s at 15 °C 50 mPa·s at 20 °C 45 mPa·s at 23 °C 42 mPa·s at 25 °C 34 mPa·s at 30 °C
Flash point	130 °C (ASTM D 93)
Solubility	miscible with water in any ratio

Shelf life of the standard stabilized product: 6 months at max. 30 °C from date of delivery

**For further information, please
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