

Raw Materials for Polycarboxylate Superplasticizers

High performance water reducing agents and slump retention additives for concrete and mortar are based on the so-called polycarboxylate ether chemistry. Key elements of these polymers are functional polyethylene glycols which are copolymerized with other carboxylic monomers.

Polyethylene glycol monomethyl ethers (M-PEGs)

M-PEG range polyglycols are linear, mono hydroxy-functional polyethylene glycol monomethyl ethers that are completely water soluble. M-PEGs are esterified with methacrylic acid to the corresponding polyglycol mono methacrylates which are used for the polymerization of polycarboxylate superplasticizers. The key factor in the quality for this application is a low content of dihydroxy-functional contaminants (diol content) to avoid side products.

Product	Molar mass g/mol	Hydroxyl value mg KOH/g	Diol content Area% HPLC	Water content % (w/w)	Appearance at 25 °C
M 350	330 - 370	approx. 160	Max. 1.0	Max. 0.5	Liquid
M 500	470 - 530	approx. 112	Max. 0.5	Max. 0.5	Liquid
M 750	720 - 780	approx. 75	Max. 1.0	Max. 0.25	Liquid
M 1000	970 - 1060	approx. 55	Max. 1.0	Max. 0.1	Waxy
M 2000	1800 - 2200	approx. 28	Max. 2.0	Max. 0.1	Solid
M 5000	4500 - 5500	approx. 11	Max. 1.5	Max. 0.1	Solid

120,000
Pounds

