

Paint Removers

Specialty cellulosic polymers for paint remover formulations



METHOCEL™ and ETHOCEL™ cellulose ethers provide the following benefits:

PRODUCT FEATURES	FUNCTIONAL BENEFITS
Soluble in organic solvents	Thickening and gelling Improves product efficacy* Excellent flow characteristics Reduced evaporation rate increases contact time with substrate
Shear-thinning behavior in solution	Brush-able and sprayable formulations High low-shear viscosity so stripper remains on vertical surfaces
Derived from renewable wood pulp	Natural, green chemistry alternative to non-renewable materials

** METHOCEL™ 311 is specifically designed for enhanced solubility in organic solvents while remaining fully soluble in water. The unique solubility of METHOCEL™ 311 lends itself to applications where both water solubility and organo-solubility offer advantages – as in paint stripper formulations. These products have good rheology properties and reduced solvent evaporation rates. Paint remover formulations which include METHOCEL™ 311 have longer contact times and cling to vertical surfaces to remove several layers of paint with a single application.*

Application	Recommended product	Usage level %
Paint removers	METHOCEL™ 311	0.5 – 1.5
	METHOCEL™ E10M *	1.0 – 2.5
	ETHOCEL™ Standard 300	1.5 – 2.5

* To perform well, METHOCEL™ E10M requires some water in the formulation



METHOCEL™ 311 grades provide excellent dry flow properties, low dust formation and lump-free dispersibility in both water and organic solvents. METHOCEL™ 311 can be added directly to any solvent or solvent blend under normal agitation. When using solvent blends, there is no need to pre-disperse the product in a non- or low-solvent component. The molecular design of METHOCEL™ 311 enables solubility in water, certain organic solvents and in blends of solvents.

Solubility and solution appearance of cellulose ethers in typical paint remover solvents

SOLVENT*	METHOCEL™ 311 SOLUTION APPEARANCE	ETHOCEL™ Standard 300 SOLUTION APPEARANCE
Ethanol	Hazy, gels	Clear, smooth
Methanol	Hazy, gels	Clear, smooth
Ethanol/Water 40/60	Clear, smooth	Insoluble
Methanol/Water 40/60	Clear, smooth	Insoluble
THF	Swellable	Clear, smooth
THF/Water 60/40	Clear, smooth	Insoluble
Isopropanol	Insoluble	Clear, smooth
Isopropanol/Water 80/20 – 40/60	Clear, smooth	Clear, smooth to insoluble
Polypropylene glycol	Insoluble	Insoluble
Dimethyl formamide	Clear, smooth	Clear, smooth
Dowanol PM	Hazy, gels	Clear, smooth
Benzyl alcohol	Hazy, gels	Clear, smooth
Diethylene glycol butyl ether	Insoluble	Clear, smooth
Dimethyl carbonate	Insoluble	Clear, smooth
Dimethyl sulfoxide (DMSO)	Insoluble	Clear, smooth
Cellosolve	Swellable	Clear, smooth

* Please ensure that the solvent used in the formulation is authorized for the country in which you intend to sell the paint remover.

Typical properties of Methocel™ 311 products

Typical properties	
Physical form	Slightly off-white powder or granules
Viscosity (1% Brookfield RVT, RT, 20 rpm) in Water Methanol* Ethanol* Methylene Chloride*	> 10,000 mPas 500 mPas (after 1hr) / 650 mPas (after 24hrs) 600 mPas (after 1hr) / 900 mPas (after 24hrs) 7,500 mPas (after 1hr) / 10,000 mPas (after 24hrs)

* Please ensure that the solvent used in the formulation is authorized for the country in which you intend to sell the paint remover.

Typical paint remover formulation containing METHOCEL™ 311

Component	Amount %
Solvent / solvent blend	91.0 – 97.0
Surfactant	0.3 – 2.0
METHOCEL™ 311	1.0 – 3.0

Typical paint remover formulations containing ETHOCEL™ Standard 300

Formulation A

Component	Amount, wt%
Dimethyl carbonate (DMC)	58.8
Dimethyl sulfoxide (DMSO)	19.6
Xylene	19.6
ETHOCEL™ Standard 300	2.0

Formulation B

Component	Amount, wt%
Benzene methanol (Benzyl alcohol)	78.4
Diethylene glycol monobutyl ether	19.6
ETHOCEL™ Standard 300	2.0

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WHO WE ARE

DuPont Global Specialty Solutions (GSS) is a business of DuPont Nutrition & Biosciences.

GSS offers METHOCEL™, WALOCEL™ CRT, and ETHOCEL™ cellulose ethers, Lattice® microcrystalline cellulose, POLYOX™ water-soluble resins and Scogin® alginates. GSS supports its customers around the world to develop, optimize, and manufacture their products.

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