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Cellulosic Solution Provider

**MECELLOSE®**

MC, HPMC, HEMC



**LOTTE FINE CHEMICAL**

# MECELLOSE®

## Overview



MECELLOSE®, environmentally friendly, uses cellulose as a primary source, which can be obtained from wood or cotton. Cellulose is a water-insoluble natural polymer that has 30~65% crystallinity formed by hydrogen bonds between molecules. Through a chemical process called 'Etherification', this water-insoluble cellulose is turned into water-soluble nonionic cellulose ether, MECELLOSE®.

## Application & Grade

### Tile Adhesive

MECELLOSE® promises the high performance and excellent working efficiencies for attachment of tiles to various substrates.

Being slip resistance and having better open time is the key to better adhesive requirements.

These improvements can only be gained through MECELLOSE®.



Grade	Viscosity (mPa·s, 2% solution)	Tile Cement Class	Properties
HiEND-1001	4,000 ~ 6,500	Premium	Superior overall performance & good workability
HiEND-2001	7,000 ~ 13,000	Premium	Superior overall performance & Excellent adhesion strength
HiEND-2003	5,000 ~ 11,000	Premium	Superior overall performance & Excellent wetting capability
HiEND-3001	18,000 ~ 24,000	Premium	Superior overall performance & Good open time
FMC-23021	26,000 ~ 36,000	Normal	Excellent slip resistance & Good open time
FMC-2094	33,000 ~ 43,000	Normal	Good adhesion strength & High water retention
ETC-4001	35,000 ~ 45,000	Normal	Good open time & Excellent heat resistance
ETC-4010	33,000 ~ 48,000	Normal	Excellent open time & Good workability
EMA-70U	50,000 ~ 70,000	Normal	Excellent open time & High thickening efficiency

## Gypsum based Plaster

Gypsum based plaster displays different properties based on the type of formulations and resource origins. That's why special grades of MECELLOSE® have been developed to meet the specific requirements of our customers.



Grade	Viscosity (mPa·s, 2% solution)	Application	Properties
FMC-74004	35,000 ~ 43,000	Hand	High thickening efficiency & Good sag resistance
FMC-22512	25,000 ~ 35,000	Machine	Easy workability & excellent sag resistance
HiPER-4002	40,000 ~ 50,000	Machine	Excellent lump reduction & High water retention
FMC-7115	27,000 ~ 37,000	Finishing	High water retention & Good workability
FMC-23021	25,000 ~ 35,000	Joint Filler / Finishing	Fast dispersing effect & no lump & Easy workability

## Cement based Plaster (Render)

Cement based render with MECELLOSE® ensures superior quality and high efficiencies when applied to job sites.

Have a look at the information on the below to see how you can customize your products to gain a competitive advantage.



Grade	Viscosity (mPa·s, 2% solution)	Application	Properties
FMC-2071	7,000 ~ 13,000	Render	Excellent workability & Less retardation of cement hydration
HiEND-3001	18,000 ~ 24,000	Render	Excellent sag resistance & Good workability
FMC-22512	25,000 ~ 35,000	Render	Excellent water retention & Good sag resistance

## Skim Coat

Skimcoat with MECELLOSE® offers smooth wall surface.

It ensures easy workability, long pot life, excellent water retention and more.



Grade	Viscosity (mPa·s, 2% solution)	Properties
FMC-25002	45,000 ~ 55,000	Superior overall performance & Excellent adhesion strength
FMC-25004	46,000 ~ 56,000	Superior overall performance & Good open time

## EIFS / ETICS

EIFS with MECELLOSE® promises even higher performances and excellent working efficiencies on job sites.

MECELLOSE® leads to high sag resistance and long embedding time, which are the required key properties of EIFS.

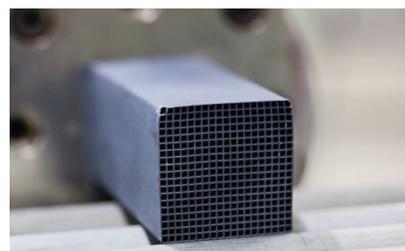


Grade	Viscosity (mPa·s, 2% solution)	Properties
FMC-2070	14,000 ~ 22,000	Excellent workability & Good sag resistance
FMC-23021	25,000 ~ 35,000	Excellent slip resistance & Good open time
FMC-24502	40,000 ~ 50,000	Excellent open time & Less stickiness

## Extrusion

MECELLOSE® enables differentiated & optimized products for extrusion.

MECELLOSE® helps to improve water retention, lubrication dispersion stability and green strength.



Grade	Viscosity (mPa·s, 2% solution)	Application	Properties
PMB-40H	3,500 ~ 5,600	Ceramic	Excellent pressure, Very good green-body hardness & Good surface state
PMB-15UFF	13,500 ~ 16,500	Ceramic	Excellent pressure, Very good green-body hardness & Excellent extrusion pressure
EMA-70U	50,000 ~ 70,000	Cement	Excellent extrusion speed, Very good green-body hardness & Good surface state

## Joint Compound & Putty

MECELLOSE® provides good performance in terms of tape adhesion, workability and prevention of shrinkage and crack formation. Furthermore, MECELLOSE® is recommended both for standard and lightweight joint compounds.



Grade	Viscosity (mPa·s, 2% solution)	Application	Properties
FMC-53001	30,000 ~ 40,000	All purpose	Good tape adhesion
FMC-54501	40,000 ~ 50,000	All purpose	Superior crack resistance
PMH-9860	30,000 ~ 40,000	Light weight	Easy to work

## Latex based product (Plaster, Paint, Joint filler etc.)

Grade	Viscosity (mPa·s, 2% solution)	Application	Properties
PMC-15US	12,000 ~ 18,000	Latex based plaster	Long open time
PMC-40US	35,000 ~ 45,000	Latex based paint	Good workability
PMC-50US	45,000 ~ 55,000	Latex based joint filler	Excellent thickening efficiency

### Packaging

MECELLOSE® is packed in the following two types of packages.

20Kg

Net multi-layer paper bag with polyethylene inner liner

- 600kg is placed on one pallet, and  
9.6MT is loaded in one container of 20ft

350Kg

Net jumbo bag with polyethylene inner liner

- 1,050kg is placed on one pallet, and  
10.5MT is loaded in one container of 20ft



### Storage

MECELLOSE® should be stored under dry and clean conditions in its original packaging due to its hygroscopic properties.

## MECELLOSE® HiEND Grades

MECELLOSE® HiEND is a cellulose ether which enhances functional properties of professional tile cement mortars. MECELLOSE® HiEND grades provide a set of performances compared to existing qualities.

Excellent  
open time

High  
adhesion strength

Fast  
setting

Perfect  
slip resistance

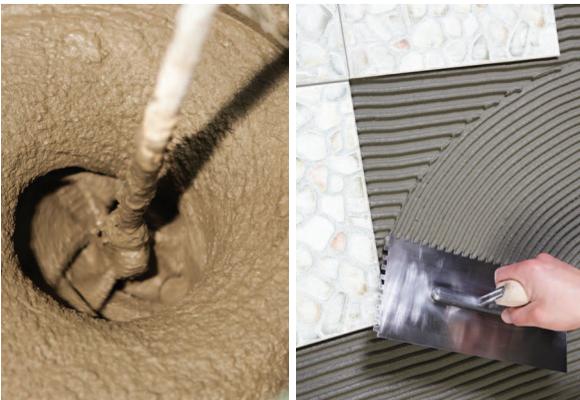
### Characteristics of MECELLOSE® HiEND

Grade	Viscosity (20 °C, 2%, mPa·s)	Water demand	Adhesion strength	Setting time	Slip resistance	Open time
HiEND-1001	4,000 ~ 6,500	Medium	Excellent	Excellent	Normal	Good
HiEND-2001	7,000 ~ 13,000	High	Excellent	Excellent	Good	Good
HiEND-2003	5,000 ~ 11,000	High	Excellent	Good	Good	Excellent
HiEND-3001	18,000 ~ 24,000	High	Excellent	Good	Excellent	Good

## 01 Perfect solution for overall cement based dry-mixture

### ✔ Workability

MECELLOSE® HiEND grades provide excellent workability and easy handling.



### ✔ Tensile adhesion strength

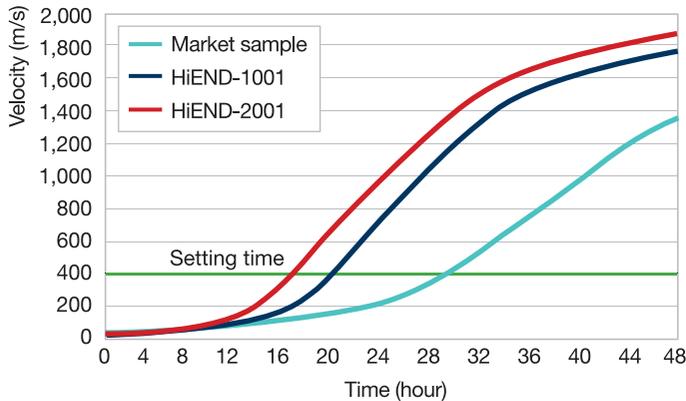
MECELLOSE® HiEND grades help to optimize the adhesion strength in tile cement mortar.

	Storage conditions		
	Initial	Heat ageing	Water immersion
Market sample	1.2MPa	0.8MPa	0.5MPa
MECELLOSE® HiEND	≥1.5MPa	≥1.2MPa	≥1.0MPa

## 02 Less retardation effect and excellent standing strength

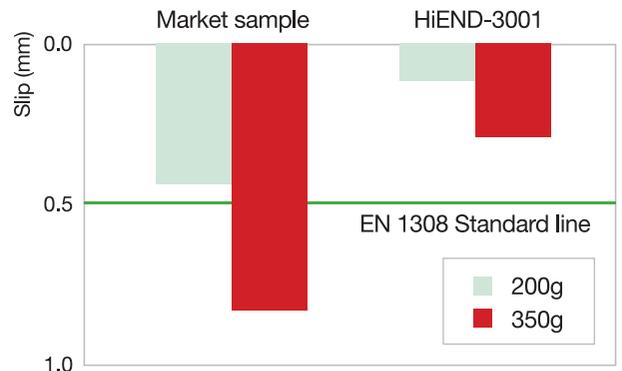
### ✔ Setting time

MECELLOSE® HiEND-1001/2001 contribute to less retardation effect and shorter setting time.



### ✔ Slip resistance

MECELLOSE® HiEND-3001 improves the slip resistance regardless of tile size.

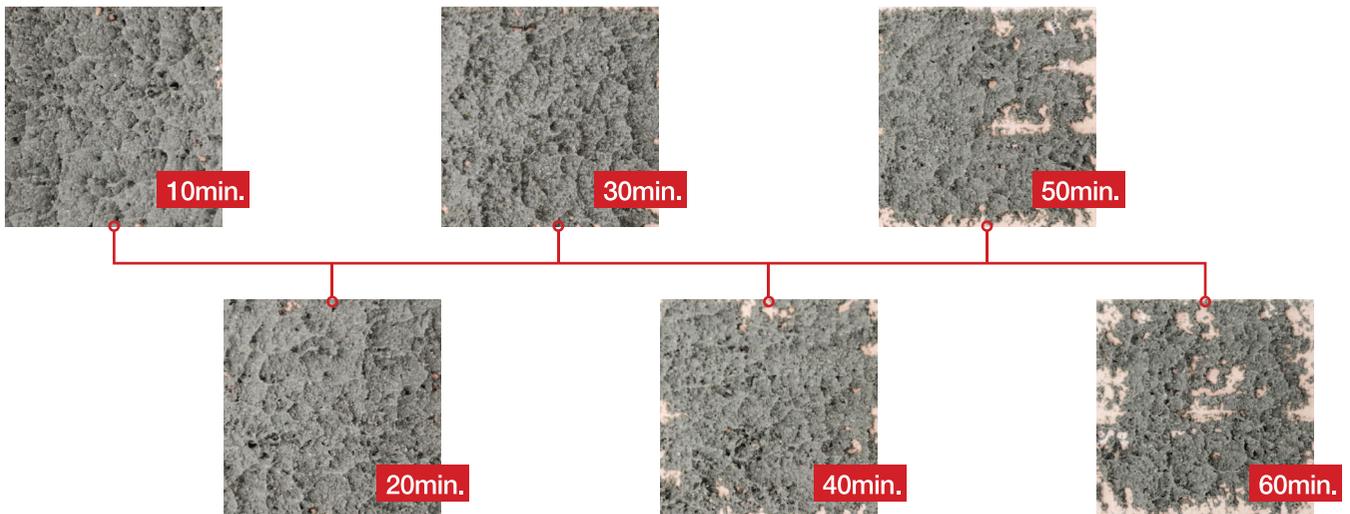


## 03 Excellent wetting capability

### ✔ Visual open time (wetting capability)

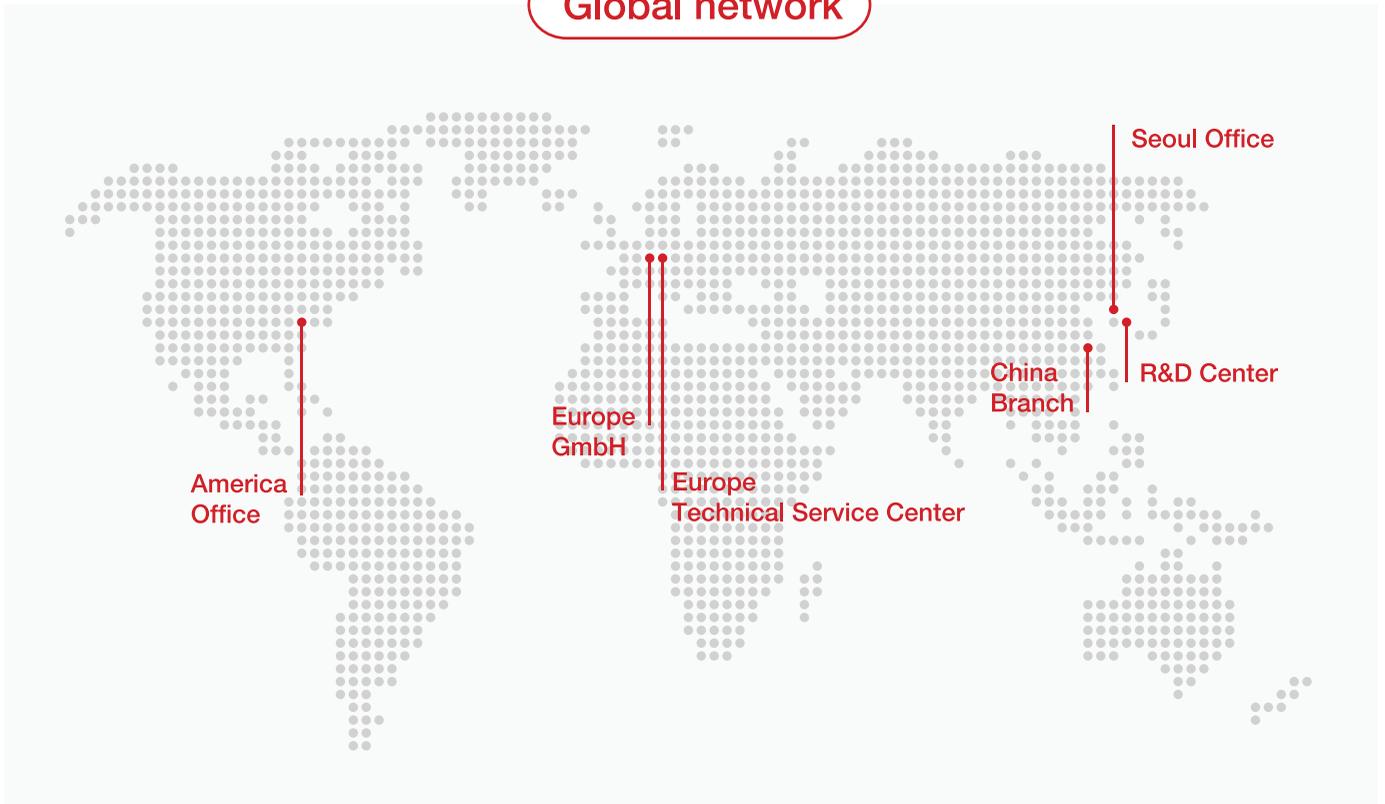
MECELLOSE® HiEND-2003 provides prolonged visual open time and high water retention.

Elapsed time (min)



※ Visual open time can be changed depending on the dosage of MECELLOSE® and test materials of cement mortars.

## Global network



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### Seoul Office

Add : 26F, 27F, Glasstower Bldg., 534, Teheran-ro, Gangnam-gu, Seoul, Korea (06181)  
TEL : +82-2-6974-4811 / 4841  
E-mail : Hecellose\_sales@lottechem.com / Mecellose\_sales@lottechem.com

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### R&D Center

Add : 19, Yeocheon-ro 217beon-gil, Nam-gu, Ulsan, Korea (44714)  
TEL : +82-52-270-6701

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### China Branch

Add : Rm1515, Shanghai International Trade center, No.2201, West Yan' An Road Shanghai P.R. China 200336  
TEL : +86-21-62703936-122  
E-mail : LFCellulose\_china@lottechem.com

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### Europe GmbH

Add : Ober der Roeth 4, 65824 Schwalbach am Taunus, Germany  
TEL : +49-6196-7727-510  
E-mail : LFCEG\_sales@lottechem.com

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### Europe Technical Service Center

Add : Winchesterstrasse 2, 35394 Giessen, Germany  
TEL : +49-641-9392-7963  
E-mail : LFCEG\_TScenter@lottechem.com

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### America Office

Add : 840 Gessner Road, Suite 500 Houston, Texas, USA (77024)  
TEL : +1-713-904-3378  
E-mail : LFCellulose\_US@lottechem.com