

# Performance Additives for Modern Drymix Mortars

Performance Additives Building & Construction Product Portfolio –  
Europe, Middle East and Africa

# Experience

the difference

The rapid pace of change in today's construction industry requires the continuous development of new high-performance products to improve the quality and sustainability of building materials. The way we build is changing and new standards are emerging to meet the improvements demanded in our places of work as well as in our homes.

The need for better-performing, more sustainable and more cost-effective construction chemicals to meet these new challenges has never been greater. Nowhere is the demand for better performance more obvious than in Europe, Middle East and in Africa, where the construction industry is raising standards year after year.

We at AkzoNobel's Building and Construction business relish the opportunity to take on these challenges and enable our customers to address the new needs emerging in the construction industry.

Following the pioneering efforts in 1968 in the production of redispersible polymer powder, ELOTEX® products established themselves as the benchmarks in several drymix mortar applications and still today remain at the

forefront of innovation. Similarly, BERMOCOLL® cellulose ethers, with more than 50 years of history in the construction industry, now form a complementary technology to our redispersible polymer powder range. The Performance Additives technology package for drymix mortar industry is rounded with the ELOTEX® specialty additives range, which includes several unique products, bringing additional performance to the most demanding drymix mortar applications.

With our unrivalled product portfolio, strong Research, Development and Innovation capabilities, technical support expertise and global manufacturing presence, we offer our customers formulation expertise, experience and product competence to ensure their continued success in a very demanding and ever-changing industry.

# How to find the perfect fit

Our product portfolio comprises three main technologies: BERMOCOLL® cellulose ethers, ELOTEX® redispersible polymer powders, and ELOTEX® specialty additives. Whether used as standalone additives or in combination with one another, our products offer a powerful toolkit for the development of drymix mortar formulations for the construction industry.

## **BERMOCOLL® Cellulose Ethers**

More than 50 years of production experience enable us to offer an optimised portfolio of BERMOCOLL® cellulose ethers to the construction industry. Our BERMOCOLL® products are based on cellulose, a natural polymer derived from wood or plant fibres and we offer following main cellulose ether types, Ethyl Hydroxyethyl Cellulose (EHEC) and Methyl Ethyl Hydroxyethyl Cellulose (MEHEC). Both product groups are obtained through a chemical substitution process known as etherification. BERMOCOLL® cellulose ethers are unique in the industry and have been developed to impart a range of properties in drymix mortars. Depending on the end-user requirements, BERMOCOLL® products provide:

- Increased water retention
- Improved consistency to make thin layer products workable
- Controlled rheology to provide sag resistance
- Reduced segregation of different formulation ingredients
- Improved adhesion on porous substrates
- Optimized air pore stability for improved workability
- Improved adhesion to polystyrene boards

In addition to the conventional uses of BERMOCOLL® cellulose ethers in drymix mortar formulations, our products are also recommended as rheology modifiers for ready-to-use dispersion based pasty systems.

ELOTEX® redispersible polymer powders have a decisive influence on cement, lime or gypsum based finished drymix mortar products, as well as on cement free and mineral-binder free system. Our free-flowing redispersible polymer powders are obtained through spray-drying of optimised latex dispersions.

Our expertise in the development and production of special latex dispersions allows AkzoNobel to supply an unprecedented range of products specifically developed to bring defined improvements to a wide range of mortars:

- Excellent mortar workability
- Increased adhesion to porous and non-porous substrates
- Reduced rigidity and improved flexibility
- Increased abrasion resistance
- Reduced water adsorption
- Ensured long term durability

Our ELOTEX® product range also offers distinct benefits in formulating products to very specific requirements such as the EMICODE EC1<sup>PLUS</sup> VOC requirements or German BfR XIV requirements for contact with potable water, and, where required, assist formulators in meeting demanding air quality standards for indoor use (e.g. LEED).

## **ELOTEX® Specialty Additives**

The ELOTEX® specialty additives range comprises a number of differing technologies ranging from formulated additives such as our ELOTEX® CAST family to encapsulated silane technology used in the development of our ELOTEX® SEAL products.

In applications ranging from flooring, grouts over external thermal insulation composite systems to plastering and renders, our customers can experience unique improvements brought about by the specialty additives products, such as:

- Improved water resistance
- Increased hydrophobicity
- Superior water repellency
- Reduced efflorescence
- Unparalleled stain resistance
- Improved workability
- Excellent leveling

# Flooring – Quality from the bottom up

ELOTEX® and BERMOCOLL® products support the rheology and workability of the full range of flooring formulations improving ease of on-site application and ensuring exceptionally smooth, defect-free surfaces.

In the finished flooring, our products enhance all of the key physical characteristics required of modern flooring. Continuous improvement of our product range ensures that our products enable you to reach lowest VOC emission levels required in the industry.

### Typical applications

- Industrial and residential flooring
- Cement based self-leveling compounds and screeds
- Gypsum based floorings
- Pumpable and hand-applied compounds

### Benefits

- Increased leveling, surface aesthetics and abrasion resistance
- Improved flexural and tensile bond strength on various substrates
- Reduced formulation complexity
- Option of using different qualities of raw materials
- Stabilisation against bleeding and segregation
- Improved defoaming properties
- Formulating to EMICODE EC1<sup>PLUS</sup> requirements

## Redispersible Polymer Powders

●●● = excellent ●● = very good ● = good

Products	ELOTEX®	FL2200	FL2211	FL2280	FL3210
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/E 3 EC1 <sup>PLUS</sup>	VA/E 3 EC1 <sup>PLUS</sup>	VA/E 3 EC1 <sup>PLUS</sup>	VA/VV/E 5 EC1 <sup>PLUS</sup>
<b>Physical Properties</b>	Flowability Surface appearance Robustness in formulation Abrasion resistance Defoaming	●● ●● ● ● –	●● ●● ● ● ●●●	●● ●●● ●● ●● ●●●	●●● ●● ●●● ●●● ●●
<b>Applications</b>	Cement based SLC with casein Cement based SLC with synthetic plasticizers Gypsum based SLC Pumpable screeds	●● ●●● ●● ●	●● ●●● ●● ●●	●● ●●● ●● ●●●	●●● ●●● ●●● ●●
<b>Comments</b>		Newly developed high quality non-defoamed RPP with extremely low VOC emissions (formaldehyde free), good leveling effects and universal properties for leveling compounds.	High quality de-foamed RPP with good flow and leveling effects.	Newly developed high quality de-foamed RPP with extremely low VOC emissions (formaldehyde free), excellent leveling properties and improved surface appearance.	High quality de-foamed RPP providing excellent flow effects and good compatibility with other formulation ingredients.

## Specialty Additives

Products	ELOTEX®	CAST710	FLOWKIT74
<b>Technical Information</b>	Functionality VOC Emission Class	Rheology Enhancer EC1 <sup>PLUS</sup>	Plasticizing Polymer EC1 <sup>PLUS</sup>
<b>Physical Properties</b>	Stabilization Flowability Surface appearance Defoaming	●● ●● ●● ●●●	●● ●●● ●●● ●●
<b>Applications</b>	Cement based SLC Gypsum based SLC Gypsum based SLS	– ●● ●●●	●●● ● –
<b>Comments</b>		New and unique product based on innovative technology specifically designed for gypsum (beta, FGD) based SLS.	Combination of ELOTEX® technologies in a single, unique product for levelling compounds with improved compatibility to different cement qualities.

SLC = Self-leveling compound | SLS = Self-leveling screed

## Cellulose Ethers

Products	BERMOCOLL®	E 230 X
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	EHEC 300 no extra fine powder
<b>Physical Properties</b>	Stabilization Water retention	●●● ●●●
<b>Applications</b>	Cement based SLC with casein Cement based SLC with synthetic plasticizers Gypsum based SLC and SLS	●●● ●●● ●●
<b>Comments</b>		Non-modified, low viscosity cellulose ether, designed to improve the consistency, stability and water retention of flooring compounds.

# Tiling – Flexible Connections

Cementitious tile adhesives formulated with ELOTEX® and BERMOCOLL® products are easy to work with, environmentally friendly, easy to apply and offer flexible, long lasting performance of tiled areas.



ELOTEX® and BERMOCOLL® products for tile adhesives deliver high adhesive strength, high sag resistance, increased freeze-thaw stability and very good working properties.

### Typical applications

- Standard quality C1 and C2 tile adhesives (EN 12004)
- High quality flexible tile adhesives C2S1 (EN 12004)
- High quality flexible adhesives suitable for outdoor applications C2S2 (EN 12004)

- Floor and wall tiling
- All different formats (large and small) of porous and non-porous tiles
- Mineral and non-mineral substrates

### Benefits

- Excellent adhesive bond strength on different substrates
- Increased plastic behaviour and flexibility
- Increased cohesive force
- High wet strength values
- Excellent open time and sag resistance

### Redispersible Polymer Powders

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Products	ELOTEX®	MP2100	FX3300	FX5600	FX6300	ST2401
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emicode Class	VA/E 3 EC1 <sup>PLUS</sup>	VA/VV/E 5 EC1 <sup>PLUS</sup>	VA/VV/E/Ac 0 EC1	VA/E/VC 0 EC1 <sup>PLUS</sup>	VA/E 3 EC1 <sup>PLUS</sup>
<b>Physical Properties</b>	Thixotropy Open time Flexibility Wet adhesion	– ● ● ●	●● ●● ●● ●●	– ●● ●●● ●●	– ●●● ●●● ●●●	●●● ●● ● ●
<b>Applications</b>	Standard quality C1 High quality C2–C2S1 Outdoor application C2S2	●●● ● –	●● ●●● –	●● ●● ●●●	●● ●●● ●●	●●● ● –
<b>Comments</b>		High quality RPP with multipurpose properties suitable for standard tile adhesives.	High quality, flexible RPP with excellent work-ability, recommended for high quality tile adhesives and large tiles.	High quality, flexible RPP with excellent workability and water resistance, recommended for high quality tile adhesives, large tiles and outdoor applications at high RPP dosage.	High quality, flexible RPP with excellent workability, improved wet adhesion and increased open time properties, recommended for large tiles and high quality tile adhesives like C2S1, C2ES1 and C2TES1.	High quality, medium thixotropic RPP with multipurpose properties suitable for thixotropic wall tile adhesives.

### Cellulose Ethers

Products	BERMOCOLL®	M 10	M 30	M 50	BCM 050	MT 500
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 7'500 no fine powder	MEHEC 18'000 no fine powder	MEHEC 30'000 no fine powder	MEHEC 3'900 strong fine powder	MEHEC 4'500 very strong fine powder
<b>Physical Properties</b>	Open time Water retention Anti-sagging	●● ● ●	●● ●● ●	●● ●●● ●	●● ●● ●●	●●● ●● ●●●
<b>Applications</b>	Standard quality C1 High quality C2–C2S1 Outdoor application C2S2	●● ●●● ●	●●● ●● ●	●●● ●● ●	●● ●●● ●●	●● ●●● ●●
<b>Comments</b>		Non-modified, low viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based tile adhesives.	Non-modified, medium viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based tile adhesives.	Non-modified, medium high viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based tile adhesives.	Strongly modified, low viscosity cellulose ether specifically designed for C2S1 cement based tile adhesives. Improves water retention, consistency, workability and strength of formulations.	Extra strongly modified, low viscosity cellulose ether specifically designed for C2, C2ES1, C2TES1 cement based tile adhesives. Improves water retention, consistency, workability, open time and especially wet strength properties of formulations.

# Grouts – Sealing the Gaps

Tile grouts incorporating ELOTEX® and BERMOCOLL® products, seal the gaps between tiles and compensate for any unevenness. In addition, tile joints perform an architectural and aesthetic function with their pattern and coloring.

Performance Additives offer the broadest range of products to improve properties across the complete range of grouting mortars. Our products have been designed to improve workability, filling performance and sag resistance of wall grouts.

### Typical applications

- Flooring and wall grouting
- Cement based grouts CG1 and CG2 (EN 13888)
- All different format porous and non-porous tiles
- Indoor and outdoor applications

### Benefits

- Improved adhesion to tile edges
- Increased flexibility and deformability
- Excellent hydrophobic and water repellent properties
- Outstanding oleophobicity and stain resistance
- Reduced efflorescence
- Improved water retention, consistency and workability

## Redispersible Polymer Powders

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Products	ELOTEX®	MP2100	HD1500	HD2000	HD4500
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/E 3 EC1 <sup>PLUS</sup>	VA/W 0 EC1	VA/E 3 EC1 <sup>PLUS</sup>	VA/W/Ac 0 EC1
<b>Physical Properties</b>	Hydrophobicity Water uptake Defoaming	– – –	●● ●●● ●●●	●● ●● ●	●●● ●● –
<b>Applications</b>	Cement based grouts CG1 Cement based grouts CG2	●●● ●●●	●● ●●●	●●● ●●	●● ●●
<b>Comments</b>		High quality RPP with multipurpose properties for standard cement based grouts. Use in combination with ELOTEX® SEAL products is recommended.	Highly defoamed, high quality hydrophobic RPP designed for grouts with very good long term water resistance.	Multipurpose high quality hydrophobic RPP designed for tile grouts with improved water resistance.	High quality hydrophobic RPP designed for grouts with very good long term water resistance.

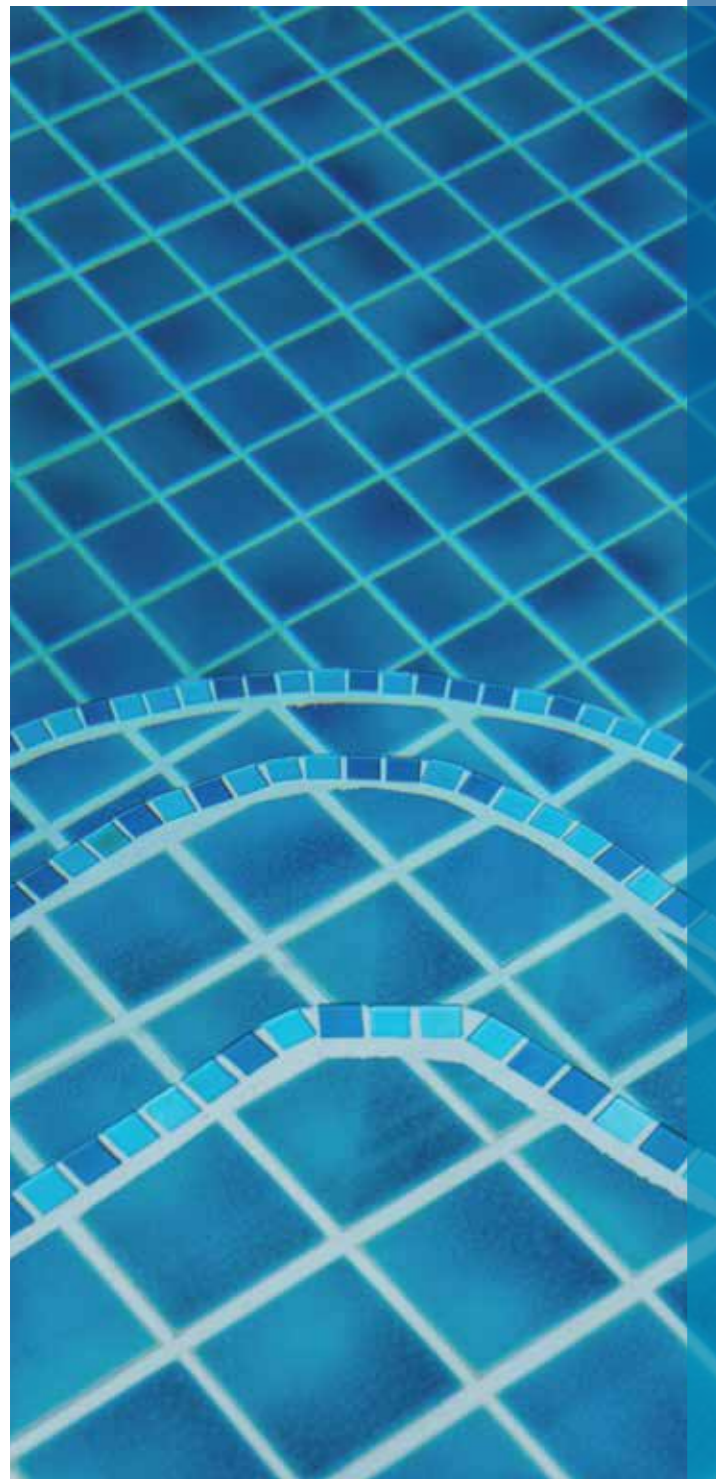
## Specialty Additives

Products	ELOTEX®	SEAL81	SEAL200	SRT100	ERA100	ERA200
<b>Technical Information</b>	Functionality	Hydrophobic	Hydrophobic	Stain-resistant	Anti-efflorescence	Anti-efflorescence
<b>Physical Properties</b>	Hydrophobicity Oleophobicity Stain-resistance Anti-efflorescence	●● – – –	●●● ● ● –	●●● ●●● ●●● –	– – – ●●●	● – – ●●●
<b>Applications</b>	Cement based grouts CG1 Cement based grouts CG2	● ●●	● ●●●	●● ●●●	●●● ●●●	●● ●●
<b>Comments</b>		Encapsulated silane in powder form with excellent miscibility and long storage time, provides water repellent properties to cement based grouts.	Highly active encapsulated silane in powder form with excellent miscibility and long storage time, provides strong hydrophobicity to cement based grouts.	Highly active encapsulated silane in powder form, providing outstanding hydrophobicity, oleophobicity and stain resistance to cement based grouts. Product ensures excellent workability and mixing properties for cement based systems.	Resin in powder form reduces primary efflorescence of hydraulic setting grout mixes.	Resin in powder form reduces primary and secondary efflorescence of hydraulic setting grout mixes which additionally provides water repellency.

## Cellulose Ethers

Products	BERMOCOLL®	M 10	E 351 X
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 7'500 no fine powder	EHEC 4'000 no extra fine powder
<b>Physical Properties</b>	Air entrainment* Water retention	●● ●●●	●●● ●●
<b>Applications</b>	Cement based grouts CG1 Cement based grouts CG2	●● ●●●	●● ●●●
<b>Comments</b>		Non-modified, low viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based tile adhesives.	Non-modified, low viscosity cellulose ether suitable for improving water retention, consistency, workability and strength of cement based grouts.

\* EHEC entrains more air compared to MEHEC



# ETICS – Sustainability through Energy Savings

The use of ELOTEX® and BERMOCOLL® products is essential for the workability, water retention, open time and general physical properties of the ETICS (External Thermal Insulation Composite System) mortars.

### Typical applications

- Adhesive mortars
- Base coat
- Top coat

### Benefits

- Increased adhesion, especially on EPS, XPS and MW boards
- Increased flexibility and impact resistance
- Increased cohesion
- Increased surface abrasion resistance
- Avoids crack formation
- Increased long-term performance



## Redispersible Polymer Powders

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Products	ELOTEX®	FX2320	FX2380	FX2510
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VAE 0 EC1 <sup>PLUS</sup>	VAE 0 EC1 <sup>PLUS</sup>	VAE 0 EC1 <sup>PLUS</sup>
<b>Physical Properties</b>	Hydrophobicity Flexibility Dry adhesion Wet adhesion Impact resistance	- ●●● ●●● ●● ●●●	- ●●● ●●● ●● ●●●	● ●●● ●●● ●●● ●●●
<b>Applications</b>	Adhesive mortar Combo mortar Base coat	●●● ●●● ●●●	●●● ●●● ●●●	●●● ●●● ●●●
<b>Comments</b>		High quality flexible RPP for the modification of cement based mortar and plaster systems, specially designed for External Thermal Insulation Composite Systems.	High quality flexible RPP for the modification of cement based mortar and plaster systems. Specially designed for superior ETICS with spray machine application and extended mesh embedding time.	High quality flexible RPP for the modification of cement based mortar and plaster systems, specially designed for External Thermal Insulation Composite Systems.

## Specialty Additives

Products	BERMOCOLL®	PAD 2
<b>Physical Properties</b>	Adhesion on EPS	●●●
<b>Applications</b>	Adhesive mortar Base coat	●●● -
<b>Comments</b>		Specially formulated polystyrene-adhesion enhancing additive, especially recommended for cement based ETICS adhesive mortars which are used to fix all kind of polystyrene boards to the building surface.

## Cellulose Ethers

Products	BERMOCOLL®	M 30	M 50	M 70
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 18'000 no fine powder	MEHEC 30'000 no fine powder	MEHEC 42'000 no fine powder
<b>Physical Properties</b>	Water retention Open time	● ●●	●● ●●	●●● ●●●
<b>Applications</b>	Adhesive mortar Base coat	●● ●●	●●● ●●●	●● ●●
<b>Comments</b>		Non-modified, medium viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based ETICS products.	Non-modified, medium high viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based ETICS products.	Non-modified, high viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based ETICS products.

# Waterproofing – Keeping Water at Bay

Highly flexible cementitious waterproofing membrane modified with ELOTEX® redispersible polymer powders are ideal for use on substrates prone to shrinkage, cracking, movements, stresses or vibrations.



ELOTEX® redispersible polymer powders facilitate the application of flexible waterproofing membranes on substrates which are difficult to coat. The resulting polymer-modified membrane is resistant against chloride and sulphate ions, CO<sub>2</sub> and other aggressive media.

## Typical applications


- Waterproofing of flat roofs
- Under-tile waterproofing and waterproofing of interior wet areas (showers, baths, kitchens)
- Waterproofing of interior and exterior cellar walls
- Sealing of sewage installations
- Waterproofing of swimming pool and Spa areas
- Waterproofing of water tanks
- Surface protection of structural concrete and general building protection

## Benefits


- Excellent adhesion on various substrates
- Provide resistance to water and pressing water
- Improved flexibility and crack bridging performance
- Improved abrasion resistance
- Enhance long term weathering characteristics

## Redispersible Polymer Powders for Flexible Waterproofing Membranes

●●● = excellent ●● = very good ● = good

Products	ELOTEX®	FX2322 	FLEX8300
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/E 0 EC1 <sup>PLUS</sup>	Ac 0 EC2
<b>Physical Properties</b>	Hydrophobicity Flexibility Crack bridging Robustness to variation of water content	– ●●● ●●● ●●●	● ●●● ●● ●
<b>Applications</b>	Flexible membranes	●●●	●●●
<b>Comments</b>		Highly flexible high quality RPP particularly well suited for use in flexible sealing compounds, ensuring superior crack bridging properties.	Highly flexible high quality RPP with excellent saponification resistance particularly suited for use in flexible sealing compounds.

## Redispersible Polymer Powders for Rigid Waterproofing Membranes

Products	ELOTEX®	HD1500	HD2000 	HD4500
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/W 0 EC1	VA/E 3 EC1 <sup>PLUS</sup>	VA/W/Ac 0 EC1
<b>Physical Properties</b>	Hydrophobicity Robustness to variation of water content Defoaming	●● ● ●●●	●● ●● ●	●●● ●●● –
<b>Applications</b>	Rigid membranes	●●●	●●●	●●
<b>Comments</b>		High quality, flexible highly defoamed hydrophobic RPP for rigid water proofing slurries, grouts and plasters with very good long term water resistance.	Multipurpose high quality hydrophobic RPP for rigid water proofing slurries, grouts and plasters with very good water resistance.	High quality flexible RPP with very good water repellency and resistance for rigid waterproofing membranes.



# Repair – As Good as New

Heavy traffic, climatic conditions, and pollution are all factors challenging building structures on a daily basis. Sooner or later, renovation is necessary in order to maintain structural integrity.



ELOTEX® and BERMOCOLL® products improve repair mortar rheology, workability and physical properties. Polymer-modified mortars have increased CO<sub>2</sub> impermeability and resistance to many other types of pollutants.

### Typical applications

- Structural and non-structural concrete repair

### Benefits

- High early strength
- Increased adhesive strength to concrete substrates
- Reduced shrinkage and cracking
- Increased hydrophobicity and reduced water absorption
- Optimized flexural and compressive strength
- Increased plasticity and flexibility
- Improved water retention

### Redispersible Polymer Powders

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Products	ELOTEX®	FL1210	FX7000	ST2401	TITAN8100
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/W 5 EC1	St/Ac 0 EC1	VA/E 3 EC1 <sup>PLUS</sup>	Ac 0 EC1
<b>Physical Properties</b>	Hydrophobicity Defoaming Flexibility Adhesion to different substrates	● ●● ●● ●	● ● ●●● ●●●	- - ●● ●	● ● ● ●●●
<b>Applications</b>	Non structural repair Structural repair	●● ●●	- ●●●	●●● ●	- ●●●
<b>Comments</b>		Highly defoamed high quality RPP with reduced water adsorption and certain hydrophobicity. Very good for high strength applications like concrete repair.	High quality RPP highly resistant to saponification specifically suited for manufacturing polymer-modified dry mixtures for concrete repair.	High quality, medium thixotropic RPP with multipurpose properties suitable for non structural repair mortars on walls or overhead.	High quality RPP offering increased adhesive strength to concrete substrates, particularly suitable for systems requiring very high dry and wet strengths such as concrete repair mortars.

### Cellulose Ethers

Products	BERMOCOLL®	M 10
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 7'500 no fine powder
<b>Physical Properties</b>	Water retention	●●●
<b>Applications</b>	Non structural repair Structural repair	●●● ●●
<b>Comments</b>		Non-modified, low viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based concrete repair mortars.

# Gypsum Joint Fillers – Smoothly filled

Gypsum joint fillers are generally used between gypsum boards in combination with paper strip as reinforcement to give a strong and even surface for further processing with paint, wall paper or finishing plaster.



Gypsum-based filler materials are used to fill the gaps between board divisions and for smoothing and filling irregularities in walls and ceilings. Whether you need to ensure adhesion and cohesion or improve the workability properties, the ELOTEX® and BERMOCOLL® product ranges have been designed to help you meet all requirements. In addition, with use of our ELOTEX® SEAL product, increased life time and durability of gypsum-based joint fillers is guaranteed.

### Typical applications

- Gypsum based trowelling and jointing compounds
- Interior applications where extended humidity resistance or water resistance of gypsum building products is required

### Benefits


- Water repellency and bulk hydrophobisation
- Increased durability of gypsum building materials
- Increased adhesion and cohesion
- Increased dry surface abrasion resistance
- Increased water retention and improved workability

### Cellulose Ethers

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Products	BERMOCOLL®	BCM 108	CCA 470	CCA 328
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 9'500 strong fine powder	EHEC 17'000 strong fine powder	EHEC 33'500 strong fine powder
<b>Applications</b>	Gypsum based board jointing compound	●●●	●●●	●●●
<b>Comments</b>		Highly modified low viscosity cellulose ether for improving water retention, consistency and stability for gypsum based jointing compounds.	Highly modified medium viscosity cellulose ether for improving water retention, consistency and stability for gypsum based jointing compounds.	Highly modified high viscosity cellulose ether for improving water retention, consistency and stability for gypsum based jointing compounds.

### Redispersible Polymer Powders

Products	ELOTEX®	AD0110	AD0150 
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA 5 EC1	VA 5 EC1 PLUS
<b>Physical Properties</b>	Adhesion to paper	●●●	●●●
<b>Applications</b>	Gypsum based board jointing compound	●●●	●●●
<b>Comments</b>		Hard high quality RPP with excellent adhesion and cohesion properties with gypsum and to paper.	Hard high quality RPP with excellent adhesion and cohesion properties with gypsum and to paper.

### Specialty Additives

Products	ELOTEX®	SEAL712
<b>Technical Information</b>	Functionality Chemical base	Hydrophobicity Silane
<b>Physical Properties</b>	Hydrophobicity Anti-efflorescence	●●● ●
<b>Applications</b>	Gypsum based board jointing compound	●
<b>Comments</b>		Encapsulated silane in powder form with excellent mixing and workability properties, long term storage stability and unique water repellent properties in gypsum based joint fillers.

# Gypsum Plasters – Indoor durability ensured

Plasters based on gypsum or combined with hydrated lime are commonly used as interior leveling plasters for walls and ceilings.

They can be hand-applied or machine applied to increase efficiency. Using ELOTEX® and BERMOCOLL® products you ensure adhesion to all substrates, hydrophobicity and durability and perfect workability.

### Typical applications

- Hand applied interior base coat plaster
- Machine applied interior base coat plaster
- Interior finishing / Skim coat plaster

### Benefits

- Improved adhesion to a wide range of substrates
- Increased water repellency and hydrophobicity
- Improved water retention, consistency and stability



### Redispersible Polymer Powders

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Products	ELOTEX®	MP2100
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/E 3 EC1 <sup>PLUS</sup>
<b>Applications</b>	Interior base coat plaster Interior finishing / skim coat plaster	●●● ●●●
<b>Comments</b>		High quality RPP with multipurpose properties excellent for gypsum based plaster products.

### Specialty Additives

Products	ELOTEX®	SEAL712	ELOSET542
<b>Technical Information</b>	Functionality	Hydrophobicity	Thickener
<b>Physical Properties</b>	Hydrophobicity Anti-efflorescence Thixotropy	●●● ● -	- - ●●●
<b>Applications</b>	Interior base coat plaster Interior finishing / skim coat plaster	●●● ●●●	●●● ●●●
<b>Comments</b>		Encapsulated silane in powder form with excellent mixing and workability properties. Long term storage stability and unique water repellent properties in gypsum plasters.	Starch Ether in powder form with linear thixotropic function to improve the workability and anti sagging of the gypsum plaster. Also the open time any yield will be improved.

### Cellulose Ethers

Products	BERMOCOLL®	CCA 612	CCA 425	CCM 1079
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	EHEC 36'500 strong extra fine powder	EHEC 42'000 low fine powder	MEHEC 63'000 strong fine powder
<b>Applications</b>	Hand applied interior base coat plaster Machine applied interior base coat plaster Interior finishing / skim coat plaster	- ●●● -	- - ●●●	●●● - -
<b>Comments</b>		Highly modified high viscosity cellulose ether for improving water retention, consistency and stability of gypsum based plasters.	Low modified high viscosity cellulose ether for improving water retention, consistency and stability of gypsum based plasters.	Highly modified very high viscosity cellulose ether for improving water retention, consistency and stability of gypsum based plasters.

# Cement and lime based renders – Durability inside and outside

Cement or cement lime renders are used for exterior and wet interior applications because of their higher strength and durability.

ELOTEX® and BERMOCOLL® products are used to improve the workability, adhesion, flexibility and surface resistance of such renders. Additional properties like hydrophobicity, thixotropicity as well as reduced efflorescence can also be achieved by the use of our specialty additives.

### Typical applications

- Interior and exterior base coat renders
- Interior and exterior finishing renders and Skim coats

### Benefits

- Improved adhesion to various substrates
- Increased water repellency and hydrophobicity
- Improved water retention, consistency and stability
- Reduced primary and secondary efflorescence



## Redispersible Polymer Powders

●●● = excellent ●● = very good ● = good

Products	ELOTEX®	MP2100	ST2401	HD4500
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	VA/E 3 EC1 <sup>PLUS</sup>	VA/E 3 EC1 <sup>PLUS</sup>	VA/W/Ac 0 EC1
<b>Physical Properties</b>	Flexibility Sag resistance Hydrophobicity	● - -	● ●● -	●● - ●●●
<b>Applications</b>	Interior base coat render Interior finishing render / skim coat Exterior base coat render Exterior finishing render / skim coat	●●● ●●● ●● ●●	●●● ●●● ●● ●●	● ● ●●● ●●●
<b>Comments</b>		High quality RPP with multipurpose properties suitable for standard render dry mixes.	High quality, medium thixotropic RPP with multipurpose properties suitable for renders on walls or overhead.	High quality flexible RPP with very good water repellency and resistancy for use in exterior render dry mixes.

## Specialty Additives

Products	ELOTEX®	SEAL90	ERA100	ERA200
<b>Technical Information</b>	Functionality	Hydrophobicity	Anti-efflorescence	Anti-efflorescence
<b>Physical Properties</b>	Hydrophobicity Anti-efflorescence	●●● ●	- ●●●	● ●●●
<b>Applications</b>	Interior base coat render Interior finishing render / skim coat Exterior base coat render Exterior finishing render / skim coat	● ●●● ●●● ●●●	● ●●● ●● ●●●	● ●●● ●● ●●●
<b>Comments</b>		Encapsulated silane in fine powder form with excellent mixing and workability properties, long term storage stability and unique water repellent properties in cement based mortars.	Resin in fine powder form reduces primary efflorescence of hydraulic setting render mixes.	Resin in fine powder form reduces primary and secondary efflorescence of hydraulic setting render mixes which additionally provides water repellency.

## Cellulose Ethers

Products	BERMOCOLL®	M 30	ML 31	M 50	M 70
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 18'000 no fine powder	MEHEC 20'000 low fine powder	MEHEC 30'000 no fine powder	MEHEC 42'000 no fine powder
<b>Physical Properties</b>	Water retention Sag resistance	●● ●	●● ●●	●●● ●●	●●● ●●●
<b>Applications</b>	Interior base coat render Interior finishing render / skim coat Exterior base coat render Exterior finishing render / skim coat	●●● ●● ●●● ●●	●● ●● ●● ●●	●● ●●● ●● ●●●	● ●●● ● ●●●
<b>Comments</b>		Non-modified, medium viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based renders.	Modified medium viscosity cellulose ether for improving water retention, consistency, workability and strength of cement based renders.	Non-modified, medium high viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based renders.	Non-modified, high viscosity cellulose ether designed for improving water retention, consistency, workability and strength of cement based renders.

# Polymer Binder Systems

## Bright and Sustainable

Cement free or low cement containing polymer plasters are used as replacements for ready-to-use pasty systems or for applications where high flexibility and scrub resistance is needed.

ELOTEX® and BERMOCOLL® products are used to not only to provide a sustainability advantage of eliminating cement from dry mortar formulations but also ensures high water resistance and weathering (UV) stability of finishing coats and to improve wet scrub resistance of wall preparation skim coats.

### Typical applications


- Cement free interior and exterior decorative wall finishes
- Cement free base coats and textured decorative coats for External Thermal Insulation Composite Systems (ETICS)
- Polymer based skim coats
- Polymer plaster, jointing, smoothing and leveling compounds
- Wall paper adhesives

### Benefits

- Excellent rheology and workability of the mortar even at low temperature and higher humidity
- Extended open time
- Excellent dry adhesion
- No risk of efflorescence
- Lower CO<sub>2</sub> footprint due to no, or very low cement content

### Redispersible Polymer Powders

●●● = excellent ●● = very good ● = good

Products	ELOTEX®	CF9000	FL1210	AD0150 
<b>Technical Information</b>	Chemical base MFFT (°C) VOC Emission Class	Ac 0 EC1	VA/W 5 EC1	VA 5 EC1 <sup>PLUS</sup>
<b>Physical Properties</b>	Flexibility Wet scrub abrasion resistance UV stability Adhesion on different substrates Hydrophobicity	●●● ●●● ●●● ●●● ●	●● ●● ●● ●●● ●	- ● ●● ●●● -
<b>Applications</b>	Exterior cement free decorative finishing coats Exterior cement free skim coats Exterior powder paint Interior jointing and smoothing compound Interior powder paint	●●● ●●● ●●● - ●	●● ●● ● ●● ●●●	- - - ●●● ●
<b>Comments</b>		High flexible, high quality RPP with excellent saponification resistance and UV stability for manufacturing dry mixtures for exterior applications.	Highly defoamed high quality RPP with excellent polymer film formation and reduced water absorption. Very good for interior surface finishes on dry mixtures basis.	Environmental friendly high quality RPP with excellent workability and dry adhesion for interior surface finishes on dry mixtures basis.

### Cellulose Ethers

Products	BERMOCOLL®	BCM 108	E 230 X	M 10	M 50
<b>Technical Information</b>	Chemical base Viscosity (2%, mPas) Modification Particle size	MEHEC 9'500 strong fine powder	MEHEC 300 no very fine powder	MEHEC 7'500 no fine powder	MEHEC 30'000 no fine powder
<b>Physical Properties</b>	Anti-sagging Water retention	●●● ●●	- ●	● ●●	●● ●●●
<b>Applications</b>	Exterior cement free decorative finishing coats Exterior cement free skim coats Exterior powder paint Interior jointing and smoothing compound Interior powder paint	●● ●● ●●● ●●● ●●●	●● ●● ●●● ●● ●●●	●● ●● ●●● ●● ●●●	●●● ●●● ●● ●● ●●
<b>Comments</b>		Highly modified, low to medium viscosity cellulose ether designed for improving water retention, consistency, and workability of polymer binder based surface finishes on dry mixtures basis.	Non-modified, very low viscosity cellulose ether designed for improving consistency and workability of polymer binder based surface finishes on dry mixtures basis.	Non-modified, low to medium viscosity cellulose ether designed for improving water retention, consistency and workability of polymer binder based surface finishes on dry mixtures basis.	Non-modified, medium high viscosity cellulose ether designed for improving water retention, consistency and workability of polymer binder based surface finishes on dry mixtures basis.



# Product testing and technical service

## Always a step ahead in innovation

As a market leader, AkzoNobel Performance Additives Building & Construction is continuously investing in basic research in order to better understand the fundamental mechanisms controlling the development of the polymer – cement matrix and its impact on the physical product performance. We would be happy to share our latest advances with you and provide you with the right tools to support your new developments.

Our technical centers worldwide are strategically positioned and have the full range of equipment required to undertake testing in accordance to current of specification. Our technical staff have many decades of experience in the area of formulation development, testing and assessment of mortar systems in all applications.

Building & Construction offers its customers (dry mortar manufacturers) a first-class technical service, including advice and laboratory work in developing and optimising appropriate products, whilst always taking the regional raw material situations and requirement profiles into consideration.

### Key

●●● = excellent ●● = very good ● = good  = eco-friendly product

### Abbreviations

VA = Vinyl acetate, W = Vinyl versatate, E = Ethylene, St/Ac = Styrene/Acrylic Ester, Ac = Acrylate



[www.akzonobel.com](http://www.akzonobel.com)

AkzoNobel creates everyday essentials to make people's lives more liveable and inspiring. As a leading global paints and coatings company and a major producer of specialty chemicals, we supply essential ingredients, essential protection and essential color to industries and consumers worldwide. Backed by a pioneering heritage, our innovative products and sustainable technologies are designed to meet the growing demands of our fast-changing planet, while making life easier. Headquartered in Amsterdam, the Netherlands, we have approximately 46,000 people in around 80 countries, while our portfolio includes well-known brands such as Bermocoll, Elotex, Sikkens, International, Interpon and Eka. Consistently ranked as a leader in sustainability, we are dedicated to energizing cities and communities while creating a protected, colorful world where life is improved by what we do.

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