DOW CONSTRUCTION CHEMICALS

Product Overview Europe

Cellulose Ethers,
Redispersible Latex Powders,
Acrylic Emulsion Polymers,
Silicones,
Synthetic Thickeners,
Dispersants
and Opaque Polymers

Jointly advancing better building …

New products for
gypsum based plaster,
ETICS, cement based tile adhesives,
cementitious waterproofing,
fiber cement products and
metal roof tile coating

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Welcome to Dow Construction Chemicals

High performance products and solutions for theconstruction industry

The construction industry in Europe, Middle East and Africa is changing. Demand for high-performance, cost effective and environmentally advanced building products continues to increase as the sector adapts to meet the challenges of energy efficiency, economic constraints and demand for structures equipped for 21st century living.

Dow Construction Chemicals has evolved to address those needs with a broad product portfolio based on acrylic emulsion polymers, redispersible latex powder, cellulosic and silicone based technology.

Dow Construction Chemicals brings together the combined expertise and high research and development competence based on 40-years of industry experience. We offer in-depth application knowhow as well as effective formulation support to manufacturers of building and construction products around the world – a strong construction-focused business unit supported by global research, technical service and manufacturing facilities.

Where quality building starts

The highly reliable quality of binders and products from Dow Construction Chemicals form the heart of many innovative products and systems that have since become industry essentials.

With a broad portfolio of chemistries and brands such as WALOCEL…Cellulose Ethers, DOW…Latex Powders, DOWSIL…Silicones, PRIMAL…and UCAR…Acrylic Dispersion and AQUASET…Acrylic Thermosetting Resins Dow is a leading supplier to customers manufacturing building and construction products around the world.

Regardless of whether your customers are looking for improved workability features or demand an especially durable, high-quality end-product – we help you meet their expectations. Our experts support you in optimising formulations in order to keep key properties of your end products stable and as specified – this is where quality building starts.

The technological building blocks

The Dow Construction Chemicals portfolio is built around four core technological pillars that are essential for the development of building product formulations to meet a wide variety of needs.

Acrylic polymer dispersions and acrylic solution polymers

Customers of Dow Construction Chemicals have access to a heritage of technically advanced, high-quality binders and additives.

The business offers a wide range of dispersion for the manufacture of building and construction products including pure acrylic, styrene acrylic and vinyl acetate polymers for improving the properties of cementitious as well as non-cementitious applications. In addition, dispersants and synthetic thickeners are available for a variety of applications.

Features and benefits offered by our portfolio include strong adhesion, improved water resistance, ease of use, increased durability and more.

Applications range from dispersion based renders through to coatings for cool reflective roofs and roof tiles, and from sealants and adhesives to cementitious waterproofing membranes. High-performance acrylic thermoset binders have also been developed for use in high-performance nonwovens and in glass fiber insulation.

Cellulosic technology

Decades of experience enable Dow Construction Chemicals to offer a portfolio of cellulose-based products for construction materials with distinctive benefits across a wide range of applications.

The range includes well known brands such as WALOCEL… cellulose ethers which incorporate features such as:
- rapid development of temperature-stable, high-water retention capabilities
- selective consistency adjustment for easy workability
- precise control of rheology for good workability and sag resistance
- stabilisation of air voids
- improved substrate adhesion.

Potential applications range from tile adhesives and grouts, to fillers, levellers and joint compounds, and from reinforcing and bonding mortars for ETICS to gypsum plasters and cement-based renders.

Redispersible latex powder

DOW…Latex Powders are redispersible polymer powders that combine the performance benefits of liquid latex modifiers with the convenience, reliability and handling/ storage advantages of one-component dry systems.

They offer a variety of features and benefits for mineral-bound products, including:
- improved workability
- excellent adhesive strength on different and demanding surfaces
- improved open time
- hydrophobicity (water repellent properties)
- abrasion resistance.

The powders are used primarily as additives for products such as cement-based tile adhesives, thermal insulation systems and self-leveling flooring compounds.

DOWSIL™ silicones by DOW

Silicones

When used as admixtures, surface treatments and in-situ treatments, silanes, siloxanes and resins from Dow have a history of providing water repellency and enhanced protection for a variety of key construction materials. The range of proven and highly effective silicon-based products include hydrophobic powders, resin emulsions, hydrophobic booster, powdered antifoams. Let our experts support you in choosing the right products for the development of long-lasting building materials.

What you need, where you need it

Tailored support

The range of options offered by Dow Construction Chemicals means products can be tailored to suit a variety of applications and end-use needs. That might mean designing more cost-effective options into an existing range; creating new, environmentally advanced products to help address environmental challenges or creating formulations for a premium performance product for a high-end application.

Thanks to the wide range of expertise and broad portfolio of products based on a proven range of technologies, customers working with Dow Construction Chemicals have access to highly-competent, experienced professionals who will provide support in identifying the appropriate formulation based on the right technology and the right products.

The benefit of global resources

Combining our expertise and know-how has resulted in a worldwide network of research and manufacturing capabilities well equipped to meet the demands of today's businesses. Customers benefit from global innovations and development across all regions, and can at the same time rely on local presence that understands the specific demands of the regional marketplace.

In Europe, Middle East and Africa, Dow Construction Chemicals serves the market with regional laboratories, 13 strategically placed production plants and around 100 dedicated professionals in sales, marketing and R&D.

The team provides access to global knowledge along with on-the-ground support and in-depth market understanding, meaning it is well-equipped to respond to local needs.

In the following you will find an overview on our product range. Please consult your local sales representative to identify the specific product portfolio available in your region.

Gypsum based plaster, machine applied | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ Xtra 30-60	Functional (rheological), non-ionic cellulose ether, improving water retention – even at high temperature of the wet mortar – and workability	30.000	high
WALOCEL Xtra 40-01		40.000	no
NEW WALOCEL Xtra 40-10		40.000	low
WALOCEL Xtra 40-30		40.000	medium
WALOCEL Xtra 40-40		40.000	medium
WALOCEL Xtra 60-01		60.000	no
WALOCEL Xtra 60-30		60.000	medium
WALOCEL Xtra 60-50		60.000	high

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C

Gypsum based plaster, hand applied | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
NEW WALOCEL™ Xtra 40-10	Functional (rheological), non-ionic cellulose ether, improving water retention – even at high temperature of the wet mortar – and workability	40.000	low
WALOCEL Xtra S 50-95		55.000	very high
WALOCEL Xtra S 50-96		55.000	very high

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C

Particle size	Controlled particle morphology	Features of end-product			
		Water retention	Less stickiness	Shear stability	Standing strength
powder, fine	yes	★★★☆	★★★☆	★★★★	★★★★
powder, fine	yes	★★★☆	★★☆☆	★★☆☆	★★☆☆
powder, fine	yes	★★★☆	★★½☆	★★★☆	★★★☆
powder, fine	yes	★★★☆	★★★☆	★★★☆	★★★☆
powder, fine	yes	★★★☆	★★★☆	★★★☆	★★★☆
powder, fine	yes	★★★★	★★☆☆	★★☆☆	★★☆☆
powder, fine	yes	★★★★	★★★☆	★★★☆	★★★☆
powder, fine	yes	★★★☆	★★★☆	★★★☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Particle size	Controlled particle morphology	Features of end-product			
		Consistency build-up	Workability	Less stickiness	Standing strength
powder, fine	yes	fast	★★★☆	★★★☆	★★★☆
powder, fine	yes	fast	★★★☆	★★★☆	★★★☆
powder, fine	yes	slow	★★★☆	★★★☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Gypsum based smoothing mortar, skim coat and gypsum based joint filler | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ Xtra 40-50	Functional (rheological), non-ionic cellulose ether, improving water retention – even at high temperature of the wet mortar – and workability	40.000	high
WALOCEL Xtra 20-40		20.000	medium
WALOCEL Xtra 20-70		20.000	very high
WALOCEL Xtra 20-01		20.000	no

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s-1, 20°C

Gypsum based smoothing mortar, skim coat and gypsum based joint filler | Redispersible latex powders

Product	Characteristics	Composition	MFFT [°C]
DLP 211 (DOW™ Latex Powder)	Polymer binder, rapidly dispersible in water	VAE-VeoVa	3
DLP 212 (DOW Latex Powder)		VAE-VeoVa	0

Tape joint compound and dispersion based joint filler, smoothing mortar | Cellulose ethers

Product	Characteristics	Viscosity [mPas]	Modification
WALOCEL™ MK 25000 PFV	Functional, non-ionic cellulose ether with balanced set of application characteristics – improving body and texture	25.000[1)]	retarded dissolution
WALOCEL MW 40000 PFV		40.000	retarded dissolution

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s-1, 20°C

Tape joint compound and dispersion based joint filler, smoothing mortar | Vinyl acrylic dispersions

Product	Characteristics	MFFT [°C]	Solids [%]
TAPE-X™	High efficiency latex, rheology modifier, compatible with WALOCEL™ Cellulose Ether	10	47

Particle size	Controlled particle morphology	Features of end-product			
		Water retention	Lump reduction	Consistency build-up	Shear stability
powder, fine	yes	★★★★	★★★★	slow	★★★★
powder, fine	yes	★★☆☆	★★★★	fast	★★★☆
powder, fine	yes	★★☆☆	★★★★	fast	★★★★
powder, fine	yes	★★☆☆	★★★★	–	★☆☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Particle size	Rheology	Flexibility	Properties/behavior of end-product
powder, free-flowing	neutral	medium hard	excellent abrasion resistance
powder, free-flowing	neutral	medium	good surface appearance, no impact on setting

Particle size	Features of end-product		
	Consistency	Standing strength	Open time
powder, fine	★★★★	★★★☆	★★★☆
powder, fine	★★★☆	★★★☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Properties/behavior of end-product
Designed to improve tape bond adhesion and impart the good balance of overall application properties for smoothing mortars.

Cement based render | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MKX 6000 PF 01	Functional, non-ionic cellulose ether, improving water retention, not modified	6.000	no
WALOCEL MKX 6000 PP 20	Functional, non-ionic cellulose ether, improving water retention, modified for easy workability	6.000	low
WALOCEL MKX 15000 PF 01	Functional, non-ionic cellulose ether, improving water retention, not modified	15.000	no
WALOCEL MKX 15000 PP 25	Functional, non-ionic cellulose ether, improving water retention, modified for easy workability and standing strength	15.000	medium
WALOCEL MKX 35000 PP 10	Functional, non-ionic cellulose ether, improving significantly the water retention, modified for easy workability	35.000	low
WALOCEL MKW 10000 PP 01	Functional, non-ionic cellulose ether, improving water retention, not modified	10.000	no
WALOCEL MKW 15000 PP 30	Functional, non-ionic cellulose ether, improving water retention with modification for very high sag resistance	15.000	medium
WALOCEL MKW 20000 PP 01	Functional, non-ionic cellulose ether, improving water retention, not modified	20.000	no
WALOCEL MKW 20000 PP 20	Functional, non-ionic cellulose ether, improving water retention, modified for easy workability	20.000	low
WALOCEL MKW 20000 PP 30	Functional, non-ionic cellulose ether, improving water retention, modified for easy workability and high standing strength	20.000	medium
WALOCEL MKW 20000 PP 40	Functional, non-ionic cellulose ether, improving water retention, modified for high standing strength	20.000	high
WALOCEL MKW 30000 PP 10	Functional, non-ionic cellulose ether, improving water retention, modified for easy workability	30.000	low
WALOCEL MKW 30000 PP 30	Functional, non-ionic cellulose ether, improving water retention, modified for high sag resistance	30.000	medium
WALOCEL MKW 40000 PP 10	Functional, non-ionic cellulose ether, imparting very high water retention, modified for easy workability	40.000	low
WALOCEL MKW 40000 PP 20	Functional, non-ionic cellulose ether imparting very high water retention, modified for easy workability	40.000	low

WALOCEL MKW: all Base Coat products: excellent water retention at high wet mortar temperatures and outstanding air void stabilisation.
For Decorative and Silicate Render (RTU) please see ETICS page 12.
[1)] WALOCEL™ products: 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s-1, 20°C

Particle size	Features of end-Product				
	Water retention	Workability – ease of leveling	Reduced influence on cement setting	Shear stability	Standing strength
powder, fine	★★☆☆	★★☆☆	★★☆☆	★★☆☆	★★☆☆
powder, very fine	★★☆☆	★★★☆	★★☆☆	★★☆☆	★★☆☆
powder, fine	★★☆☆	★★☆☆	★★☆☆	★★☆☆	★★☆☆
powder, very fine	★★☆☆	★★★☆	★★☆☆	★★☆☆	★★★☆
powder, very fine	★★★★	★★★☆	★★☆☆	★★☆☆	★★☆☆
powder, very fine	★★☆☆	★★☆☆	★★★★	★★★★	★★☆☆
powder, very fine	★★☆☆	★★★☆	★★☆☆	★★★☆	★★★★
powder, very fine	★★★☆	★★☆☆	★★★★	★★★★	★★☆☆
powder, very fine	★★★☆	★★★★	★★★☆	★★★☆	★★★☆
powder, very fine	★★★☆	★★★★	★★★☆	★★★☆	★★★☆
powder, very fine	★★★☆	★★★☆	★★★☆	★★★☆	★★★★
powder, very fine	★★★☆	★★★☆	★★★☆	★★★☆	★★☆☆
powder, very fine	★★★☆	★★★☆	★★★☆	★★★☆	★★★★
powder, very fine	★★★★	★★★☆	★★★☆	★★★☆	★★☆☆
powder, very fine	★★★★	★★★☆	★★★☆	★★★☆	★★☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Cement based render | Redispersible latex powders

Product	Characteristics	Composition	Sub-application
DLP 211 (DOW™ Latex Powder)	Polymer binder, rapidly dispersible in water with good saponification resistance	VAE-VeoVa	Decorative render
DLP 212 (DOW Latex Powder)		VAE-VeoVa	Decorative render
DLP 2141 (DOW Latex Powder)		VAE-VeoVa	Decorative render

Cement based render | Silicone hydrophobic powders

Product	Characteristics	Composition	Sub-application
DOWSIL™ GP SHP 50	Silicone hydrophobic powder, rapidly dispersible in water, providing long lasting protection against water ingress.	Silane/siloxane	Decorative render/ skim coat
DOWSIL GP SHP 60+		Silicone resin/siloxane	Decorative render/ skim coat

ETICS[1] and dispersion based render | Cellulose ethers

Product	Characteristics	Sub-application	Viscosity [mPas][2]
WALOCEL™ MKW 10000 PP 01	Functional, non-ionic cellulose ether, improving water retention, not modified	Cement Render, Top Coat	10.000
WALOCEL MKS 10000 PP 25	Functional rheological, non-ionic, multipurpose additive cellulose ethers with modification to improve sag resistance and workability	Adhesive & Base Coat Mortar	13.000
WALOCEL MKX 25000 PF 25 L	Functional rheological, non-ionic, multipurpose additive cellulose ethers to improve water retention and the workability of the mortar	Adhesive & Base Coat Mortar	25.000
WALOCEL MKX 45000 PF 20 L		Adhesive & Base Coat Mortar	45.000
WALOCEL MKX 45000 PF 40 L		Adhesive & Base Coat Mortar	45.000
WALOCEL 327	Functional rheological, non-ionic, multipurpose additive cellulose ethers to improve water retention and the workability of the mortar	Adhesive & Base Coat Mortar	15.000
WALOCEL MKW 20000 PP 20	Functional rheological, non-ionic, multipurpose additive cellulose ethers to improve water retention & air void stability, less impact on cement hydration	Adhesive & Base Coat Mortar	20.000
WALOCEL MW 6000 PFV	Functional non-ionic cellulose ether with retarded dissolution to improve workability and to avoid segregation	Decorative Render (RTU)	6.000
WALOCEL MW 15000 PFV		Decorative Render (RTU)	15.000
WALOCEL MW 40000 PFV		Decorative Render (RTU)	40.000

[1] External Thermal Insulation Composite System
[2] WALOCEL products: 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C; WALOCEL 327: 2 % solution in water, Brookfield RV, 20 rpm, 20°C

MFFT [°C]	Particle size	Rheology	Hydrophobicity	Flexibility	Properties/ behavior of end-product
3	powder, free-flowing	neutral	–	medium hard	versatile
0	powder, free-flowing	neutral	–	medium	multipurpose
0	powder, free-flowing	neutral	yes	medium hard	lower water absorption

Particle size	Rheology	Hydrophobicity	Protection against efflorescence	Water contact angle (beading)	Weather resistance
powder, free-flowing	neutral	★★☆☆	★★★☆	★★☆☆	★★★☆
powder, free-flowing	neutral	★★★☆	★★★☆	★★★☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Modification	Particle size	Features of end-product					
		Water retention	Workability	Adhesion to substrate	Adhesion to insulation board	Wetting capability/ open time	Efficient thickening
no	powder, very fine	★★☆☆	★★☆☆	–	–	★★★☆	★★☆☆
medium	powder, very fine	★★☆☆	★★★★	★★★☆	★★☆☆	★★★★	–
medium	powder, fine	★☆☆☆	★★☆☆	★★★☆	★★★☆	★★★★	–
medium	powder, fine	★★★☆	★★☆☆	★★★☆	★★☆☆	★★☆☆	–
high	powder, fine	★★★☆	★★★☆	★★★☆	★★☆☆	★★☆☆	–
high	powder, fine	★★☆☆	★★★★	★★★☆	★★★★	★★★★	–
medium	powder, very fine	★★☆☆	★★☆☆	★★☆☆	★★☆☆	★★☆☆	–
retarded dissolution	powder, fine	★☆☆☆	★★★★	–	–	★★☆☆	★★☆☆
retarded dissolution	powder, fine	★★☆☆	★★★☆	–	–	★★☆☆	★★☆☆
retarded dissolution	powder, fine	★★★☆	★★☆☆	–	–	★★☆☆	★★☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

ETICS[1)] | Redispersible latex powders

Product	Characteristics	Sub-application	Composition
DLP 212 (DOW™ Latex Powder)	Polymer binder, rapidly dispersible in water with good saponification resistance	Adhesive & Base Coat Mortar	VAE-VeoVa
DLP 2141 (DOW Latex Powder)		Adhesive & Base Coat Mortar	VAE-VeoVa

[1)] External Thermal Insulation Composite System

ETICS[1)] and dispersion based render | Acrylic dispersions

Product	Characteristics	MFFT [°C]	Solids [%]
NEW PRIMAL™ 3317 EF	Quick-Set Technology for enhanced productivity in dispersion and silicone render application	5	57 – 59
PRIMAL UC-550 EF	Versatile binder	18	50
FINNDISP™ A-10	Universal binder	18	49
UCAR™ Latex DL 420 G	Universal binder	20	49
UCAR Latex DL 432 S	Low odor binder for coalescent free systems	< 5	50
UCAR Latex DL 424	High water resistant binder for renders	14	50
PRIMAL AC-339	Marble stone binder	28	48
PRIMAL TX-100	Marble stone binder	28	46,5
PRIMAL WDV-2001 ER	High UV stability for renders	7	46,5

1) External Thermal Insulation Composite System
2) This product is manufactured without added APEO (no APEO surfactants intentionally added).

MFFT [°C]	Particle size	Rheology	Hydrophobicity	Flexibility	Properties/behavior of end-product
0	powder, free-flowing	neutral	–	medium	good dry and wet adhesion
0	powder, free-flowing	neutral	yes	medium hard	lower water absorption

Properties/behavior of end-product
Pure acrylic designed for increasing the application window for ETICS[1], covering a temperature range from 1°C to 15°C and humidity up to 95%, with high early wash-out resistance and colour stability, manufactured without added APEO[2]
Versatile styrene acrylic polymer with good performance in silicate paints and dispersion based renders, manufactured without added APEO[2]. Cement stable.
Universal styrene acrylic. Can be used for primers.
Universal styrene acrylic. Can be used for primers.
Styrene acrylic, silicate stable, coalescent free polyvalent emulsion with excellent dirt pick up resistance.
Styrene acrylic recommended for applications requiring especially high water resistance due to very low water absorption. Stable with silicates.
Highly hydrophobic pure acrylic polymer for good water resistance. Ideal for marble stone finishes (no water whitening).
Highly hydrophobic pure acrylic polymer designed for especially high water resistance. Ideal for marble stone finishes (no water whitening).
Silicate and cement stable pure acrylic polymer. Low coalescent emulsions with excellent dirt pick up resistance and UV stability.

ETICS[1)] **and dispersion based render** | Silicone resin emulsions and hydrophobic booster

Product	Characteristics	Function	Solids [%]
DOWSIL™ IE 2404	Silicone resin based co-binder	Film forming silicone resin	50
DOWSIL IE 6683	Non ionic emulsion of silane/siloxane/silicone resin	Hydrophober for external wall top coat	40
DOWSIL Z-70	Non ionic emulsion of organosiloxane	Hydrophober for external wall top coat	60

1) External Thermal Insulation Composite System

Cement modifier | Acrylic dispersions

Product	Characteristics	MFFT [°C]	Solids [%]
PRIMAL™ CM-160	Low temperature cement modifier	1	50
PRIMAL CM-330	General purpose cement modifier	12	47

Cement based tile adhesive – basic quality | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MKX 40000 PF 01	Functional non-ionic cellulose ether to improve workability, water retention	40.000	no
WALOCEL MKX 60000 PF 01	Functional non-ionic cellulose ether to improve workability, water retention	60.000	no
WALOCEL MKX 60000 PF 15	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	60.000	medium
WALOCEL MW 40000 PFV	Functional non-ionic cellulose ether with retarded dissolution to improve workability, water retention	40.000	retarded dissolution
WALOCEL MW 60000 PFV		60.000	retarded dissolution

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C
[2)] Temperature stability of wet mortar

Properties/behavior of end-product
Coating with enhanced water vapor permeability and reduced liquid water penetration.
Coating with increased resistance to water penetration with expected long lasting aesthetics.
Coating with increased resistance to water penetration with expected long lasting aesthetics.

Properties/behavior of end-product
Pure acrylic polymer designed for use under low temperatures with excellent adhesion to various substrates and high flexural and impact strength. Especially suitable for repair mortars and industrial floor screeds.
Pure acrylic polymer for cement modification with excellent adhesion to various substrates and high flexural and impact strength. Especially suitable for repair mortars and industrial floor screeds.

Particle size	Features of End-Product					
	Water retention	Long adjustability time	High slip resistance	Long open time	Temperature stability[2)]	Less retarded setting
powder, fine	★★☆☆	★★☆☆	–	★☆☆☆	★★★★	★★☆☆
powder, fine	★★★☆	★★★☆	–	★☆☆☆	★★★★	★★☆☆
powder, fine	★★★☆	★★★☆	★☆☆☆	★☆☆☆	★★★★	★★☆☆
powder, fine	★★☆☆	★★☆☆	–	★☆☆☆	★★☆☆	★☆☆☆
powder, fine	★★★☆	★★★☆	–	★☆☆☆	★★☆☆	★☆☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Cement based tile adhesive – standard quality (C1) | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MKX 15000 PF 01	Functional non-ionic cellulose ether to improve workability, water retention	15.000	no
WALOCEL MKX 20000 PP 10	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	20.000	low
WALOCEL MKX 25000 PF 25 L	Functional non-ionic cellulose ether to improve workability, slip resistance	25.000	medium
WALOCEL MKX 40000 PF 01	Functional non-ionic cellulose ether to improve workability, water retention	40.000	no
WALOCEL MW 40000 PFV 50	Functional non-ionic cellulose ether with retarded dissolution to improve workability, water retention, slip resistance	40.000	high, retarded dissolution
WALOCEL MKX 45000 PP 10	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	45.000	low
WALOCEL MKX 45000 PF 20 L	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	45.000	medium
WALOCEL MKX 45000 PF 40 L	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	45.000	high
WALOCEL™ 327	Functional non-ionic cellulose ether improving adhesion strength, slip resistance	15.000	high
NEW WALOCEL™ M 20-20	Functional non-ionic cellulose ether improving adhesion strength, slip resistance	20.000	medium
NEW WALOCEL M 35-10	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance	35.000	low

[1)] WALOCEL™ products: 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C; WALOCEL 327: 2 % solution in water, Brookfield RV, 20 rpm, 20°C
[2)] Temperature stability of wet mortar

Particle size	Features of end-product					
	Water retention	Long adjustability time	High slip resistance	Long open time	Temperature stability[2)]	Less retarded setting
powder, fine	★☆☆☆	★☆☆☆	–	★★☆☆	★★★★	★★☆☆
powder, very fine	★☆☆☆	★☆☆☆	★☆☆☆	★★☆☆	★★★★	★★☆☆
powder, fine	★☆☆☆	★☆☆☆	★☆☆☆	★☆☆☆	★★★★	★★☆☆
powder, fine	★★☆☆	★★☆☆	–	★★☆☆	★★★★	★★☆☆
powder, fine	★★☆☆	★★☆☆	★★★☆	★★☆☆	★★☆☆	★☆☆☆
powder, very fine	★★☆☆	★★☆☆	★☆☆☆	★☆☆☆	★★★★	★★☆☆
powder, fine	★★☆☆	★★☆☆	★☆☆☆	★★☆☆	★★★★	★★☆☆
powder, fine	★★☆☆	★★☆☆	★★★☆	★★☆☆	★★★★	★★☆☆
powder, very fine	★☆☆☆	★★☆☆	★★☆☆	★★☆☆	★★☆☆	★★★☆
powder, fine	★★★☆	★★☆☆	★★★☆	★★★☆	★★★★	★★☆☆
powder, fine	★★☆☆	★☆☆☆	★★☆☆	★★☆☆	★★★★	★★☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Cement based tile adhesive – high quality (C2) | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ 327	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance, setting, open time	15.000	high
NEW WALOCEL™ M 10-40	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance, esp. at high water loads	10.000	medium
NEW WALOCEL M 20-20	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance, setting, open time	20.000	medium
NEW WALOCEL M 20-30	Functional non-ionic cellulose ether to improve workability, water retention, slip resistance, setting, open time	20.000	medium

[1)] WALOCEL™ products: 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C; WALOCEL 327: 2 % solution in water, Brookfield RV, 20 rpm, 20°C
[2)] Temperature stability of wet mortar
[3)] Adjusted rheology enabling higher bonding at higher water loads

Cement based tile adhesive | Redispersible latex powders

Product	Characteristics	Composition	MFFT [°C]
DLP 211 (DOW™ Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE-VeoVa	3
DLP 212 (DOW Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE-VeoVa	0
DLP 2001 (DOW Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE-VeoVa	2
DLP 2000 (DOW Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE	3

Particle size	Features of End-Product					
	Water retention	Long adjustability time	High slip resistance	Long open time	Temperature stability [2)3)]	Less retarded setting
powder, fine	★★☆☆	★★☆☆	★★★☆	★★★☆	★★☆☆	★★★☆
powder, fine	★☆☆☆	★☆☆☆	★★★★	★★★☆	★★☆☆	★★☆☆
powder, fine	★★★☆	★★☆☆	★★★☆	★★★☆	★★★★	★★☆☆
powder, fine	★★★☆	★★☆☆	★★★☆	★★★☆	★★★★	★★☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Particle size	Rheology	Flexibility	Properties/ behavior of end-product
powder, free-flowing	neutral	medium hard	versatile
powder, free-flowing	neutral	medium	multipurpose
powder, free-flowing	neutral	medium hard	improved adhesion after water immersion
powder, free-flowing	neutral	medium hard	especially suitable for high quality CBTA

Tile grouts | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MT 400 PFV	Functional non-ionic cellulose ether with retarded dissolution to avoid segregation and to improve rheology and water retention	400	retarded dissolution
WALOCEL MKW 4000 PF 01	Functional non-ionic cellulose ether to avoid segregation and to improve rheology and water retention	4.000	no

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C

Tile grouts | Redispersible latex powders

Product	Characteristics	Composition	MFFT [°C]
DLP 2141 (DOW™ Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE-VeoVa	0

Tile grouts | Silicone hydrophobic powders

Product	Characteristics	Composition	Sub-application
DOWSIL™ GP SHP 50	Silicone hydrophobic powder, rapidly dispersible in water, providing long lasting protection against water ingress.	Silane/siloxane	Tile grouts
DOWSIL GP SHP 60+	Silicone hydrophobic powder, rapidly dispersible in water, providing long lasting protection against water ingress.	Silicone resin/siloxane	Tile grouts

Particle size	Features of end-product			
	Workability	Less retarded setting	Shear stability	Water retention
powder, fine	★★★☆	★★★★	★★☆☆	★☆☆☆
powder, fine	★★☆☆	★★☆☆	★★☆☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Particle size	Rheology	Hydrophobicity	Flexibility	Properties/behavior of end-product
powder, free-flowing	neutral	yes	medium hard	low water absorption

Particle size	Rheology	Features of end-product			
		Hydrophobicity	Protection against efflorescence	Water contact angle (beading)	Weather resistance
powder, free-flowing	neutral	★★☆☆	★★★☆	★★☆☆	★★★☆
powder, free-flowing	neutral	★★★☆	★★★☆	★★★☆	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Dispersion based tile adhesive | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MW 15000 PFV	Functional non-ionic cellulose ether with retarded dissolution to improve workability and to avoid segregation	15.000	retarded dissolution
WALOCEL MW 40000 PFV	Functional non-ionic cellulose ether with retarded dissolution to improve workability and to avoid segregation	40.000	retarded dissolution
WALOCEL MW 40000 PFV 50	Functional non-ionic cellulose ether with retarded dissolution to improve workability and to avoid segregation – excellent slip resistance	40.000	highly modified, retarded dissolution
WALOCEL MW 60000 PFV	Functional non-ionic cellulose ether with retarded dissolution to improve workability and to avoid segregation	60.000	retarded dissolution

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C

Dispersion based tile adhesive | Acrylic dispersions

Product	Characteristics	MFFT [°C]
PRIMAL™ CM-230 ER	General purpose dispersion based tile adhesive	18

Particle Size	Features of end-product			
	Water retention	Workability	Long adjustability time	Efficient thickening
powder, fine	★☆☆☆☆	★★★☆☆	★★☆☆☆	★★☆☆☆
powder, fine	★★★☆☆	★★☆☆☆	★★☆☆☆	★★★☆☆
powder, fine	★★☆☆☆	★★☆☆☆	★☆☆☆☆	★★★★
powder, fine	★★★☆☆	★★☆☆☆	★★★☆☆	★★★☆☆

– no ★☆☆☆☆ fair ★★☆☆☆ good ★★★☆☆ excellent ★★★★ outstanding

Solids [%]	Properties/behavior of end-product
50	Styrene acrylic polymer with high binding power capability helping achieve very high water resistance, and excellent dry and wet adhesion on various substrates.

Self leveling underlayment (SLU) | Cellulose ethers

Product	Characteristics	Viscosity [mPas][1)]	Modification
WALOCEL™ MT 400 PFV	Functional non-ionic, retarded cellulose ether with retarded dissolution to avoid segregation and to improve rheology and water retention	400	retarded dissolution
WALOCEL MKW 4000 PF 01	Functional non-ionic cellulose ether to avoid segregation and to improve rheology	4.000	no

[1)] 2 % solution in water, Haake Rotovisko RV 100, shear rate 2.55 s^{-1}, 20°C

Self leveling underlayment (SLU) | Redispersible latex powders

Product	Characteristics	Composition	MFFT [°C]
DLP 2050 (DOW™ Latex Powder)	Polymer binder, rapid dispersible in water with good saponification resistance	VAE	3

Self leveling underlayment (SLU) | Silicone powdered antifoam

Product	Characteristics	Composition
DOWSIL™ GP 7070	Powdered silicone antifoam	Polydimethylsiloxane/silica

Particle size	Features of end-product				
	Flow	No segregation	Workability	Water retention	Less air voids
powder, fine	★★☆☆	★☆☆☆	★★★☆	★☆☆☆	★☆☆☆
powder, fine	★☆☆☆	★★★★	★★☆☆	★★★☆	★★☆☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Particle Size	Rheology	Flexibility	Properties/Behavior of End-Product
powder, free-flowing	flow modifier	medium hard	generates very low VOC emissions (suitable for systems that must comply with EMICODE EC 1 Plus).

Particle size	Rheology	Other	Properties/behavior of end-product
Free flowing powder	neutral	No impact on early mechanical properties	Reduce air incorporation during mixing of mortar containing superplasticizers.

Cementitious waterproofing membrane | Acrylic dispersions

Product	Characteristics	Tg [°C]
NEW PRIMAL™ AS-8012 R	2K waterproofing flexible membrane	-8
PRIMAL™ CM-500	Waterproofing flexible membrane for very low temperatures (-20°C)	-35
PRIMAL AS-48 ER	Waterproofing flexible membrane for high adhesion and pressure resistance	-1

[1] Manufactured without added APEO (no APEO surfactants intentionally added)
[2] Complies with German regulations on materials to come in contact with drinking water

Primer | Acrylic dispersions

Product	Characteristics	MFFT [°C]
PRIMAL™ UC-550 EF	Versatile primer	18
UCAR™ Latex DL 420 G	Universal primer	20
FINNDISP™ A-10	Universal binder	18
FINNDISP AGP 04	Penetrating primer	1
UCAR Latex XZ 91930.00	Stabilizing primer	< 5
PRIMAL AC-339	Water resistant sealer	28

Fiber glass – high-performance nonwoven | Acrylic dispersions

Product	Characteristics	Tg [°C]
PRIMAL™ ECO-16	Battery separators	33
PRIMAL ECO-46	Wall covering	-12
PRIMAL ECO-88	Flooring and roofing reinforcement	11
PRIMAL GL-618L	Flooring and roofing reinforcement	27

[1] UF: Urea Formadelhyde; MF: Melamine Formadelhyde

Solids [%]	Properties/behavior of end-product
56	Styrene acrylic polymer[1)2)] demonstrating reliable performance in cementitious waterproofing membranes, especially for elongation and crack bridging
52,5	Pure acrylic polymer[1)2)] for 2K-waterproofing membranes supporting high flexibility at low temperatures, excellent water resistance and adhesion on various substrates.
56	Styrene acrylic polymer[1)2)] for 2K-waterproofing membranes with excellent water and alkaline resistance and outstanding adhesion and crack bridging properties at room temperature.

Solids [%]	Properties/behavior of end-product
50	Versatile styrene acrylic polymer for ETICS clear or pigmented primer application.
49	Styrene acrylic binder for basic primer application. Very good adhesion on various substrates.
49	Universal styrene acrylic. Can be used for primers.
33	Styrene acrylic polymer with very fine particle size and excellent penetration into porous substrates.
49	Styrene acrylic binder for basic primer application. Very good adhesion on various substrates.
48	Very hydrophobic and alkali resistant pure acrylic polymer as primer or sealer for cementitious substrates with excellent resistance to efflorescence and excellent chalk adhesion.

Solids [%]	Properties/behavior of end-product
45,5	Superior acid resistance good tensile strength, UF/MF[1)] resins compatible.
47	Excellent dry and wet tensile strength, low water penetration, hydrophobic, durable to washing.
50	Good adhesion especially on polyester fibers. Excellent strength and solvent resistance, high dimensional stability at elevated temperatures, excellent durability to washing and dry-cleaning and excellent wet and dry tensile strength. Compatible with UF/MF[1)] resins.
47	Superior dry wet and hot tensile strength; outstanding shear and chemical stability, low yellowing and foaming, UF/MF[1)] resins compatible.

Fiber cement coating | Acrylic dispersions

	Product	Characteristics	MFFT [°C]	Solids [%]
NEW	PRIMAL™ SS-640	Primer, pigmented top coat and clear varnishes	28	50
	PRIMAL E-357 EF	Primer and pigmented top coat	55	47,5

Fiber cement solutions | Silicone hydrophober – integral protection

	Product	Characteristics	Rheology	Solids [%]
	DOWSIL™ Z 6289	Neat silicone resin, low viscosity liquid	Slight plasticizing effect	> 98
NEW	DOWSIL IE 6686	Microencapsulation of a silicone resin, easily water dispersible	Neutral	30

Fiber cement impregnation | Silicone hydrophober – surface treatment

Product	Characteristics	Dilutable in	Solids [%]	Si-H based
Silicone impregnation	Non film forming hydrophobic treatment			
DOWSIL™ 520	Non ionic emulsion of a mix of silane and organofunctional siloxane	Water	40	Yes
DOWSIL IE 6682	Non ionic emulsion of a mix of silane and silicone resin designed as impregnation primer. Can be top coated.	Water	52,5	No

Properties/behavior of end-product
Pure acrylic polymer for use on fiber cement substrate in formulations that result in high flexibility, exterior durability, low VOC and excellent early blocking resistance. Could be used as primer as well as top coat, pigmented and clear for roof and façade tiles.
Pure acrylic polymer developed for use on fiber cement substrates with outstanding exterior durability, excellent efflorescence resistance and fast hardness development.

Properties/behavior of end-product
Integral water repellent for fiber cement products providing long lasting protection against water ingress, which can enable improved durability, improved dimensional stability, reduced efflorescence and longer lasting aesthetics.
Integral water repellent for fiber cement products providing long lasting protection against water ingress, which can enable improved durability, improved dimensional stability, reduced efflorescence and longer lasting aesthetics.

Features of end-product				Properties/behavior of end-product
Hydrophobicity	Depth of penetration	Water contact angle (beading)	Weather resistance	
				Treatment of fiber cement surfaces leading to impregnation and providing durable protection against water ingress which can enable improved durability and dimensonal stability, reduced efflorescence and longer lasting aesthetics. Quick absorption during application (no blocking issue).
★★★★	★★★☆	★★★★	★★★★	Can be post coated.
★★★★	★★★★	★★☆☆	★★★★	Can be post coated. Can be mixed with DOWSIL™ 520 to increase depth of penetration.

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Elastomeric roof coating and liquid applied waterproofing membranes | Acrylic and acrylic polyureth

Product	Characteristics	Tg [°C]	Solids [%]
PRIMAL™ EC-5210 PU	High performance binder for liquid applied roofing membranes with waterproofing performance	-36	52,5
PRIMAL EC-1791E	Versatile binder for multiple substrates	-40	55

Sealant | Acrylic dispersions

Product	Characteristics	Tg [°C]
PRIMAL™ E-3362	High quality pigmented sealant	-35
PRIMAL 2620	High quality translucent sealant	-34
PRIMAL 928 ER	High quality clear sealant	-3
PRIMAL P-308M	General pigmented sealant	8
PRIMAL UC-550 EF	General pigmented sealant	18

ane dispersions

	Properties/behavior of end-product
	Acrylic polyurethane polymer helping achieve excellent tensile strength and flexibility in cold and hot temperatures. Outstanding exterior durability and UV resistance, very good adhesion to various roofing substrates. Superior dirt pick up resistance.
	Pure acrylic polymer contributing to good adhesion to spray polyurethane foams, weathered modified bitumen and metal. Excellent low temperature flexibility (high crack resistance at low temperature). Excellent dirt pick-up resistance.

Solids [%]	Properties/behavior of end-product
62	High solid pure acrylic polymer for water-based pigmented sealants. PRIMAL™ E-3362 helps achieve excellent adhesion and flexibility and low modulus elasticity. Formulations pass requirements of ISO 11600 (type F, class 12.5P) or French SNJF standard.
62	High solid pure acrylic polymer for water-based translucent and pigmented sealants. PRIMAL™ 2620 contributes to outstanding adhesion and elasticity and meets the Aymar Cyclic Movement Test requirements (Class A, U.S. Federal Specification TT-S-00230C).
62,5	High solid styrene acrylic polymer for water-based clear and pigmented sealants. Sealants based on PRIMAL™ 928 ER can dry faster and demonstrate excellent clarity, excellent resistance to dirt-pick-up and blushing.
50	Styrene acrylic polymer for low VOC sealants with excellent wet strength, outstanding compatibility to silicate and excellent binding power.
50	Styrene acrylic polymer with good filler acceptance for pigmented sealants.

Flooring & assembly adhesives | Acrylic dispersions

Product	Characteristics	Tg [°C]
PRIMAL™ E-3362	General purpose flooring adhesives	-35
PRIMAL CA-187	Tackifier free flooring adhesive	-27
PRIMAL CA-172	High performance flooring adhesive	-21
UCAR™ Latex DL 435	General purpose flooring adhesives	0
UCAR Latex DL 345	Universal assembly adhesive	10

Metal roof tile coating | Acrylic dispersions

Product	Characteristics	Tg [°C]
NEW MAINCOTE™ PR-225 EF	Very good dry and wet adhesion to multiple metal surfaces	11
PRIMAL™ GC-5 ER	Formulated binder for transparent glaze coat	< 5

Concrete roof tile coating | Acrylic dispersions

Product	Characteristics	Tg [°C]
PRIMAL™ E-2001 LF	Low odor universal binder	16
PRIMAL E-822K	Universal binder for CRT coating	18
PRIMAL RS-110	Formulated binder for clear coats	< 5

Concrete solutions | Silicone hydrophober – integral protection

Product	Characteristics	Rheology	Water contact angle (beading)
DOWSIL™ IE 6692	Silane/silicone resin emulsion	Slight plasticizing effect	★★★☆
DOWSIL IE 6686	Microencapsulation of a silicone resin	Neutral	★★☆☆

Solids [%]	Properties/behavior of end-product
62	High solid pure acrylic polymer for solvent-free floor adhesives that comply with EMICODE EC 1. PRIMAL™ E-3362 helps achieve excellent adhesion to linoleum and carpet floorings.
60,5	High solid pure acrylic polymer for solvent-free and tackifier-free floor adhesives that complies with EMICODE EC 1. For formulations that require an early strength development, an excellent peel adhesion, superior water and alkali resistance and outstanding tackiness.
61	High solid pure acrylic polymer for solvent-free floor adhesives that comply with EMICODE EC 1. PRIMAL CA-172 contributes to a long open time together with early strength development, an excellent shear stability, superior water and alkali resistance and superior adhesion on hydrophobic substrates.
49	Styrene acrylate dispersion recommended for very low emission flooring adhesives for pvc, carpet, linoleum and rubber floors.
50	Versatile styrene acrylic polymer especially recommended for nail free construction adhesives for interior and exterior use.

Solids [%]	Properties/behavior of end-product
54	Acrylic co-polymer, designed for pigmented basecoats over factory applied metal roof tiles requirering flexibility to select a wider variety of steel sources without sacrificing performance. The emulsion gives excellent dry and wet adhesion to multiple metal surfaces, good exterior durability, high toughness and great binding capacity.
34	Pure acrylic polymer specifically designed for metal roof tile glaze coat. Ready formulated for industrial spray applications. Seal mineral granulates and provide good weathering properties.

Solids [%]	Properties/behavior of end-product
50	Ammonia and formaldehyde free binder, with excellent resistance to efflorescence and excellent water whitening resistance.
50	General purpose polymer for coatings on mineral substrates with excellent efflorescence resistance and excellent water whitening resistance.
45,5	Ammonia and formaldehyde free formulated binder, with excellent resistance to efflorescence and excellent water whitening resistance that can be applied within a broad application window.

Solids [%]	Properties/behavior of end-product
52,5	Integral water repellent for cementitious materials providing long lasting protection against water ingress, which can enable improved durability, reduced efflorescence and longer lasting aesthetics High contact angle of water (beading) on surface of modified materials.
30	Integral water repellent for cementitious materials. providing long lasting protection against water ingress, which can enable improved durability, reduced efflorescence and longer lasting aesthetics Can be used for foamed concrete production.

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Concrete solutions | Silicone impregnation and hydrophober – surface protection

Product	Characteristics	Dilutable in	Solids [%]
XIAMETER™ OFS 6341	Octyltriethoxysilane	Solvent	98
DOWSIL™ Z 6689	Solvent dilutable mix of silane and organofunctional siloxane	Solvent	98
DOWSIL IE 6683	Non ionic emulsion of a mix of silane, siloxane and silicone resin	Water	40
DOWSIL IE 6682	Non ionic emulsion of a mix of silane and silicone resin. designed as impregnation primer. Can be top coated	Water	52,5
DOWSIL IE 6694	Non emulsion of a mix of silane, siloxane and silicone resin. Low VOC according to CA regulations	Water	60
DOWSIL 1-6184	Neat/pure water soluble silane	Water	>90
DOWSIL IE 2610	Anionic emulsion of cross linked organosiloxane designed as impregnation film former	Water	45

Additives | Synthetic thickeners

Product	Characteristics	Solids [%]
ACRYSOL™ ASE 60 ER	ASE[1] thickener, anionic	28
ACRYSOL DR-72	Associative thickener	30
ACRYSOL TT-615	Associative HASE[2] thickener	30
ACRYSOL RM-998	Associative HEUR[3] thickener, non-ionic	20
ACRYSOL SCT-275		17,5
ACRYSOL RM-8W		21,5
ACRYSOL RM-5000		18,5
ACRYSOL RM-2020-E		20

[1] ASE: alkali swellable emulsion
[2] HASE: hydrophobically modified alkali swellable emulsion
[3] HEUR: hydrophobically modified ethoxylated urethane
[4] ETICS: External Thermal Insulation Composite System

Features of end-product			
Hydrophobicity	**Depth of penetration**	**Water contact angle (beading)**	**Weather resistance**
★★★★	★★★★	★★☆☆	★★★★
★★★★	★★☆☆	★★★★	★★★☆
★★★★	★★★☆	★★★★	★★★☆
★★★★	★★★★	★★☆☆	★★★★
★★★★	★★☆☆	★★★★	★★★☆
★★★★	★★★☆	★★★☆	★★★☆
★★★★	★☆☆☆	★★★★	★★★☆

– no ★☆☆☆ fair ★★☆☆ good ★★★☆ excellent ★★★★ outstanding

Properties/behavior of end-product
Excellent low shear efficiency, great resistance to sedimentation and sagging. Particularly suitable for dispersion based renders (ETICS[4)]), sealants, flooring adhesives.
Shear thinning rheology modifiers, particularly suitable for sealants, flooring adhesives.
Very efficient low and mid shear builder. Suggested for high sag resistance. Particularly suitable for dispersion based renders (ETICS[4)]), sealants, flooring adhesives.
Efficient low and mid shear builder. Enhanced sag resistance.
Good mid versus high shear efficiency, also generates low shear viscosity, can be used as sole thickener. Contains solvent. Particularly suitable for fiber cement coating.
Broad utility mid shear builder, excellent leveling properties, particularly suitable for fiber cement coating.
Efficient high shear builder showing balanced mid shear efficiency, good leveling properties. Particularly suitable for fiber cement coating.
High shear builder, good leveling properties. Particularly suitable for fiber cement coating.

Additives | Dispersants

Product	Characteristics	Solids [%]
OROTAN™ N-4045	Polyacid, sodium salt	45
OROTAN 731 A ER	Hydrophobic copolymer, sodium salt	25
OROTAN 165	Hydrophobic copolymer, ammonium salt	21,5
OROTAN 681	Hydrophobic copolymer, ammonium salt	35
OROTAN 850 ER LO	Polyacid, sodium salt	30

[1] ETICS: External Thermal Insulation Composite System

Additives | Opaque polymers

Product	Characteristics	Solids [%]
ROPAQUE™ Ultra E	Hollow sphere opaque polymer	30

More applications we serve

Mineral wool thermal insulation

AQUASET…– the environmentally advanced alternative binder for mineral wool insulation[1]

Dow Construction Chemicals offers thermosetting resins that can be used as an alternative to traditional formaldehyde based resins for binding mineral fibers in the production of insulation blanket products that go into building insulation systems and specialty insulation.

[1] Aquaset thermosets are made without formaldehyde or formaldehyde generating materials and do not release formaldehyde under normal operating conditions.

Properties/behavior of end-product
Enhanced cost/performance balance. Great color acceptance with high reproducibility. Low odour. Low foam generator. Particularly suitable for dispersion based renders (ETICS[1)]), fiber cement coating.
Highly efficient dispersant with good pigment wetting. Particularly suitable for dispersion based renders (ETICS[1)]), fiber cement coating.
Enhanced wet adhesion, good color acceptance, particularly suitable for fiber cement coating.
Hydrophobic dispersant. Maximises gloss potential. Contains solvent. Particularly suitable for fiber cement coating.
High efficiency with low foam generation. Enhanced stability with reactive pigments. Particularly suitable for sealants, flooring adhesives.

Properties/behavior of end-product
Opacifying synthetic pigment providing very efficient dry hiding for coatings.

Concrete admixtures

We also make precursors allowing for efficient production of PCE superplasticizers water reducers for concrete admixtures.

For more detailed information on the products available for these applications, please contact us.

About Dow

Dow (NYSE: DOW) combines global breadth, asset integration and scale, focused innovation and leading business positions to achieve profitable growth. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company, with a purpose to deliver a sustainable future for the world through our materials science expertise and collaboration with our partners. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer care. Dow operates 106 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately $39 billion in 2020. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter,

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