Adding future
with Adhesives & Sealants
additive solutions

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Shaping the future of Adhesives & Sealants

Where innovation meets performance to build stronger, smarter and more sustainable solutions

Elementis is a leading global supplier of specialty chemicals, delivering essential performance attributes to a wide range of industries. We provide rheology modifiers and complementary specialty additives to manufacturers of adhesives and sealants, industrial coatings, decorative paints, inks, construction solutions, ceramics, water treatment, and oil and gas drilling fluids.

Our technologies are designed to meet performance demands enhancing adhesive and sealant formulations. Globally recognized brands — such as BENTONE®, RHEOLATE®, THIXATROL®, THIXCIN®, BENAQUA®, DAPRO®, NUOSPERSE®, DEFOM, DISPONER, BENGEL® and SUPREAD™ — reflect our strong commitment to quality and innovation.

Our hectorite-based additives are particularly notable for their unique properties and efficiency as rheology modifiers. Hectorite is a lithium magnesium silicate that swells when sodium ions on the clay platelets hydrate, pushing the platelets apart and enabling the formation of a three-dimensional structure with gel-like viscosity.

We drive innovation through solutions that enhance performance and sustainability for our customers. By reducing energy consumption, by offering natural and bio-based additives and by focusing on new solutions for adhesive and sealant formulations.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

GOLD | Top 5%
ecovadis
Sustainability Rating
DEC 2024

A versatile and high-performance additive portfolio

Designed to enhance adhesion, sealing, and stability across applications

In the world of bonding and sealing, adhesives and sealants play a vital role: forming strong, lasting connections and protective barriers that stand up to diverse environmental demands. Their performance depends not only on formulation chemistry, but also on precise application properties, ease of use and long-term durability.

At Elementis, our portfolio of rheology modifiers and complementary additives empowers formulators to meet those demands with confidence. From sag control and anti-settling to improved extrusion, stability, and surface appearance, our technologies are engineered to optimize aspect of adhesive and sealant performance.

With our deep understanding of rheology and formulation science, Elementis is your trusted partner in developing next-generation adhesives and sealants.

BENTONE® & BENAQUA®
Rheological additives based on natural Hectorite clay can thicken aqueous and non-aqueous systems, providing excellent thixotropy, anti-sagging and anti-settling performance resulting in homogeneous matrix and smooth surfaces.

THIXATROL® and THIXCIN®
Are organic thixotrope rheological additives for non-aqueous systems, based on castor wax derivatives or polyamides. These additives impart thixotropic flow resulting in excellent sag/slump resistance while ensuring optimum extrusion or spray performance. Using THIXATROL® instead of particle based rheological additives could lead to higher elasticity and thus better durability.

DEFOM
DEFOM additives are a line of defoamers produced at our manufacturing facility in China and developed to reduce foam in water-based adhesive systems. They help ensure smooth application, better surface appearance, and improved processing by quickly breaking down surface and entrapped foam. Suitable for various adhesives like PVA, VAE, and acrylics, DEFOM products offer reliable performance even at low dosages.

DISPONER
DISPONER additives are high-performance wetting and dispersing agents designed to improve flow and surface appearance in both solvent-based and water-based adhesive systems. These products, sourced from our production site in China, offer excellent compatibility across a wide range of resins including acrylics, epoxies, polyurethanes, and hybrids. They prevent retraction and surface defects like cratering.

BENGEL®
Rheological additives are organically modified smectite clay. They are optimally developed for solvent-borne systems and manufacture in Asia.

RHEOLATE®
Our wide range of alkali swellable thickeners and nonionic synthetic associative thickeners (NiSAT) enable formulators to achieve any desired rheological profile for water-based adhesives and sealants systems.

DAPRO®
Antifoaming and defoaming agents are effective in providing air release and bubble-breaking in most adhesives and sealants systems, minimizing surface defects.

NUOSPERSE®
Wetting and dispersing agents provide good stabilization of fillers and pigments; inorganic and organic. They are widely compatible with adhesives and sealants formulas, for higher filler load while keeping suitable viscosity levels and ensuring improved long-term stability.

SUPREAD™
Surface active additives used to promote substrate wetting, eliminate or reduce film defects and help to uniform film formation.

What you can achieve with our additives

- HIGH EFFICIENCY
- FLOW & LEVELING
- BIO-BASED
- VOC FREE
- ENERGY SAVINGS
- ROBUST PRODUCTION
- HIGHER ELASTICITY (OF THIXATROL® COMPARED TO MINERAL BASED RHEOLOGICAL ADDITIVE)
- SMOOTH SURFACE
- BEAD THICKNESS CONTROL
- ABROAD COMPATIBILITY
- IMPROVED WORKABILITY (EASY EXTRUSION AND SPRAYABILITY)
- THIXOTROPIC BEHAVIOR
- SAGGING RESISTANCE
- SHORTER PRODUCTION CYCLES
- EXCELLENT ANTI-SETTLING PERFORMANCE
- HOMOGENEOUS MATRIX

ADHESIVES & SEALANTS

Elementis additives guide for Adhesives & Sealants

NON AQUEOUS SYSTEMS

BENTONE® & BENGEL® organoclays

Hectorite clay is a smectite clay that stands out for its unique layered structure, modified with quaternary ammonium compounds, it becomes an organoclay suitable for solvent-borne and solvent-free systems. This modification process transforms the hydrophilic character of the natural clay into a more organophilic form, making it highly effective in non-aqueous systems, and making it a versatile additive for different formulations.

Low Polarity systems	Mid Polarity Systems	High Polarity Systems
BENTONE 34		
BENGEL 434 (1), BENGEL 908 (1)		
BENGEL 818 (1), BENGEL 958 (1)		
BENTONE SD1, BENTONE 54 (1)		
BENTONE 38 (2)		
BENTONE SD3 (2)		
	BENTONE SD2	
	BENGEL 828 (1)	
		BENTONE 27 (2) (1), BENTONE 57 (1)
		BENATHIX

(1) Asian Made (2) hectorite based

Organoclays are compatible with a wide range of formulations, including acrylics, epoxies, and polyurethane. The choice of BENTONE® and BENGEL® additives depends on the polarity of the system. For activation at lower shear-forces we offer BENTONE SD® types and BENGEL® in super dispersible form.

Key benefits:

- Enhanced stability (e.g. anti-sedimentation)
- Film/ bead (thickness) control
- Suspension of particles resulting in homogeneous matrix and smooth surfaces
- Enhanced workability (spray/ extrusion)

Product name	Chemistry	Key benefits	Polarity		
			Low	Medium	High
BENTONE® 34	Organically modified smectite clay	For use in low to mid polarity solvent containing systems. Imparting pseudoplastic flow characteristics resulting in storage stability (anti-sedimentation) and film-thickness control (anti-sagging). Ideal also for spray application. Use of polar activator recommended.	•	•	
BENTONE SD® -1	“Superdispersable” organically modified smectite clay	For use in low to mid polarity solvent containing systems. Lower shear forces needed for proper delamination/ activation of the clay. Imparting pseudoplastic flow characteristics resulting in storage stability (anti-sedimentation) and film-thickness control (anti-sagging). Ideal also for spray application. Use of polar activator might enhance the performance especially in aromatic free systems.	•	•	
BENTONE® 38	Organically modified smectite clay	For use in low to higher polarity formulations. Imparting strongly pseudoplastic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging). Ideal also for spray application. Significantly higher efficiency compared to other smectite clays. Use of polar activator recommended.	•	•	•
BENTONE SD® -3	“Superdispersable” organically modified hectorite clay	For use in low to higher polarity formulations. Lower shear forces needed for proper delamination/ activation of the clay. Imparting strongly pseudoplastic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging). Ideal also for spray application. Significantly higher efficiency compared to other smectite clays. Use of polar activator might enhance performance.	•	•	•
BENTONE® 27	Organically modified smectite clay	For use in mid to high polarity formulations. Imparting strongly pseudoplastic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging). Significantly higher efficiency compared to other smectite clays. Use of polar activator recommended.		•	•
BENTONE SD® -2	“Superdispersable” organically modified smectite clay	For use in moderate to high polarity applications. Lower shear forces needed for proper delamination/ activation of the clay. Imparting pseudoplastic flow characteristics resulting in storage stability (anti-sedimentation) and film-thickness control (anti-sagging). Ideal also for spray application. Use of polar activator might enhance performance.		•	•
BENTONE® 54 (1)	Organically modified smectite clay	For use in low to intermediate polarity organic systems. Imparting pseudoplastic flow characteristics resulting in storage stability (anti-sedimentation) and film-thickness control (anti-sagging). Ideal also for spray application. Use of polar activator recommended.	•	•	
BENGEL 958 (1)	Organically modified smectite clay	Easy to disperse and provides good thixotropy, sag resistance, and anti-settling properties It’s recommended to be used in diverse low to medium polarity binders and solvent systems.	•	•	
BENGEL 818 (1)	Easy dispersible organically modified smectite clay	Super dispersible rheological additive that greatly simplifies the formulation and manufacture of systems that contain moderate to low polarity solvents.		•	•
BENGEL 828 (1)	Easy dispersible organically modified smectite clay	Super dispersible rheological additive that greatly simplifies the formulation and manufacture of systems that contain moderate to high polarity solvents.		•	
Bengel 434 (1)	Organically modified smectite clay	Conventional organoclay for wide range of low polarity systems.	•	•	

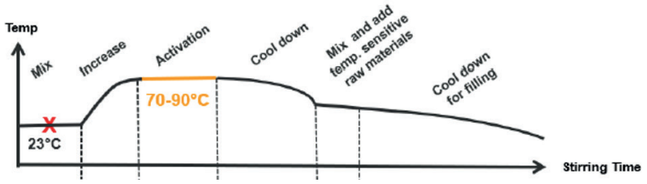
(1) Asian made additive (2) not suitable for EU

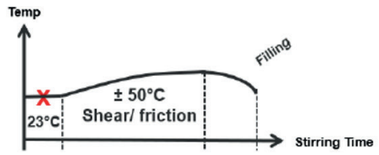
ADHESIVES & SEALANTS

THIXATROL®, THIXCIN® and DEURHEO®

THIXATROL® and THIXCIN® organic thixotrope rheological additives for non-aqueous systems are based on castor wax derivatives or polyamides. They typically need appropriate wetting and a certain activation temperature window to achieve optimum performance.

“Old” high temperature process vs. optimized process





The new THIXATROL® serie enable shorter production cycles, energy savings and excellent structure conservation upon storage. They offer superior usage efficiency compared to older generation of diamide waxes, organoclays, fumed silica, etc.

Key benefits:

- Imparting thixotropy/ pseudoplastic flow characteristics
- Excellent sag resistance at extremely high film thickness
- Higher efficiency and elasticity improvement in final application
- Shorter process times allowing for time savings and leading to higher production capacity
- Wider temperature activation window from 40ºC to 100ºC, depending on the additive, resulting in more robust process
- Suitable for spray application and extrusion process
- Improved storage stability of final formulation

Product name	Chemistry	Key benefits
THIXATROL® AS 8024	Proprietary organic	Special grade for sag resistance at elevated temperatures occurring during application process.
THIXATROL® AS 8053	Proprietary organic	Thixotropic agent for activation at low temperature (40-60°C). Suitable for solvent-free and solvent-containing formulations. Imparting strongly pseudoplastic flow characteristics resulting in slump/sag resistance and easy extrudability. Excellent atomization when used in spray applied coatings and good levelling even at very low wet-film-thickness.
THIXATROL® MAX	Proprietary organic	Thixotropic agent for activation at high temperature (60-100°C depending on polarity). Suitable for solvent-free and solvent-containing formulations. Imparting strongly pseudoplastic flow characteristics resulting in slump/sag resistance and easy extrudability/ spray application.
THIXATROL® PM 8056	Proprietary organic	Thixotropic agent for activation at a wide temperature window (50-75°C). Suitable for solvent-containing and solvent-free formulations. Imparting strongly pseudoplastic flow characteristics resulting in high sag resistance and very good sprayability.
THIXATROL® ST	Organic modified castor wax derivative	Thixotropic agent suitable for solvent-containing and solvent-free formulations; especially for low polarity aliphatic and aromatic systems.
THIXCIN® R	Derivative of castor wax	Thixotropic agent suitable for solvent-containing and solvent-free formulations; especially for low polarity aliphatic systems.
THIXATROL® AS 8058	Proprietary organic	Organic thixotrope (diamide based) rheological additive, wide activation temperature window as of low values. For solvent-borne adhesives of high polarities.
DEURHEO® 2810 [1] [2]	Poly Urea based and NMP	Easy incorporation and preactivated polyurea rheological additive. Suitable to build thixotropic flow characteristics to prevent settling and sagging in Acrylic, PU and Epoxy solvent based formulations. It does not require specific activation temperature while incorporated.

[1] Asian made additive [2] not suitable for EU

ADHESIVES & SEALANTS

NUOSPERSE®, DISPONER and DAPRO® BEZ 75

Proper pigments and fillers/extenders wetting and dispersion are essential for optimum adhesives and sealants performance and appearance. In solvent free and solvent borne formulations, our NUOSPERSE® and DISPONER enable higher filler load while improving storage stability.

Key benefits:

- Rapid filler/pigment wetting
- Long-term viscosity stability
- Excellent anti-settling performance and flocculation resistance
- Full colour development

Product name	Chemistry	Key benefits
NUOSPERSE® 2008	Anionic surfactant	Pigment dispersant for carbon blacks and organic pigments; rapid pigment wetting; compatibilizer.
NUOSPERSE® FA 196	Phosphate ester	Wetting agent for fillers/ extenders in solventfree formulations enabling for higher filler load while improving storage stability. Pigment dispersant for carbon blacks, organic pigments and compatibilizer (improving compatibility between pigment preparations and base paints).
NUOSPERSE® 9850 (1)	High molecular weight polymer solution	Universal dispersant for all kind of pigments; providing high colour strength and stabilization pigments. Exhibits excellent dispersing and wetting performance in SB and WB systems. Recommended in low-to medium polarity systems.
NUOSPERSE® FX 9086	Polymeric	Providing stable pigment dispersions as far as stable formulations with extenders/ fillers in solventborne and solventfree systems. (in aromatic-free solvent).
DISPONER 910 (1) (2)	phosphoric ester-based	Universal dispersant for organic and difficult-to-disperse fillers - providing strong wetting performance resulting in low base viscosities at high filler/ pigment load.
DAPRO® BEZ 75	Sulphonated Castor oil	Anti-settling agent especially for aromatic-free systems and efficient polar activator for organoclays.

(1) Asian made additive (2) not suitable for EU

DEFOM

Full range of defoamers specially developed for solvent-based and solvent-free additives.

Product name	Chemistry	Key benefits
DAPRO® AP1622 (1) (2)	Silicone / hydrocarbon solvent	Excellent foam control in solventborne systems, persistent performance.
Defom 2700 (1) (2)	Silicone free anti-foam	Good foam control and compatibility.
Defom 3500 (1) (2)	Silicone free anti-foam	Good foam control and compatibility.
Defom 5300 (1)	Modified polysiloxane	Fast bubble release, good compatibility.
Defom 6500 (1) (2)	Modified polysiloxane	Broad defoaming and anti-foaming performance in solventborne systems.
Defom 6800 (1) (2)	Polysiloxane containing hydrophobic particles	Suitable for fast defoaming and deaeration in high viscosity and filler-loaded systems.

(1) Asian made additive (2) not suitable for EU

ADHESIVES & SEALANTS

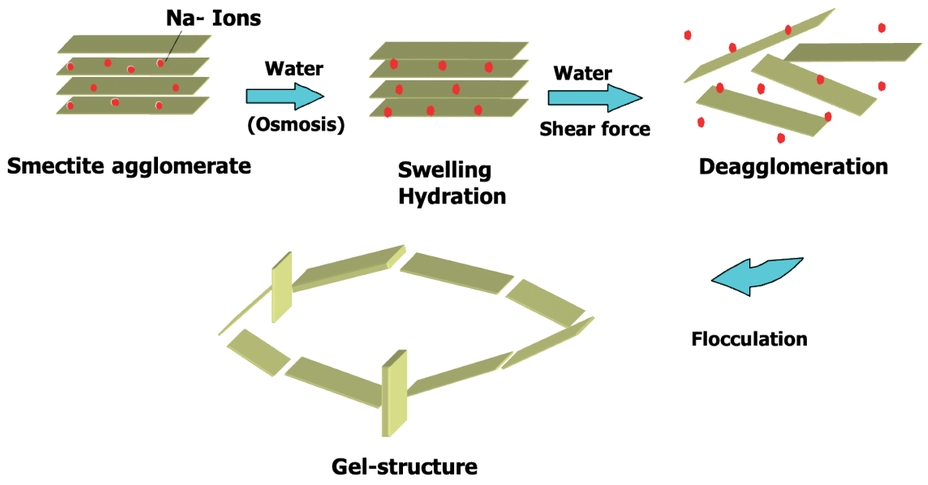
Elementis additives guide for Adhesives & Sealants

AQUEOUS SYSTEMS

ADHESIVES & SEALANTS

BENTONE® & BENAQUA® - Natural clays

Elementis'BENTONE® and BENAQUA® clay thickeners for waterborne systems are mainly based on hectorite, a naturally occurring smectite clay that swells in water under high shear. Hectorite clays are composed of lithium magnesium silicate sheets, which delaminate in water to provide an open, three-dimensional gel structure.
Hectorite's distinctive platelet shape and high surface area, make it exceptionally effective in thickening aqueous systems, impart yield points and enhance suspension property and storage stability.



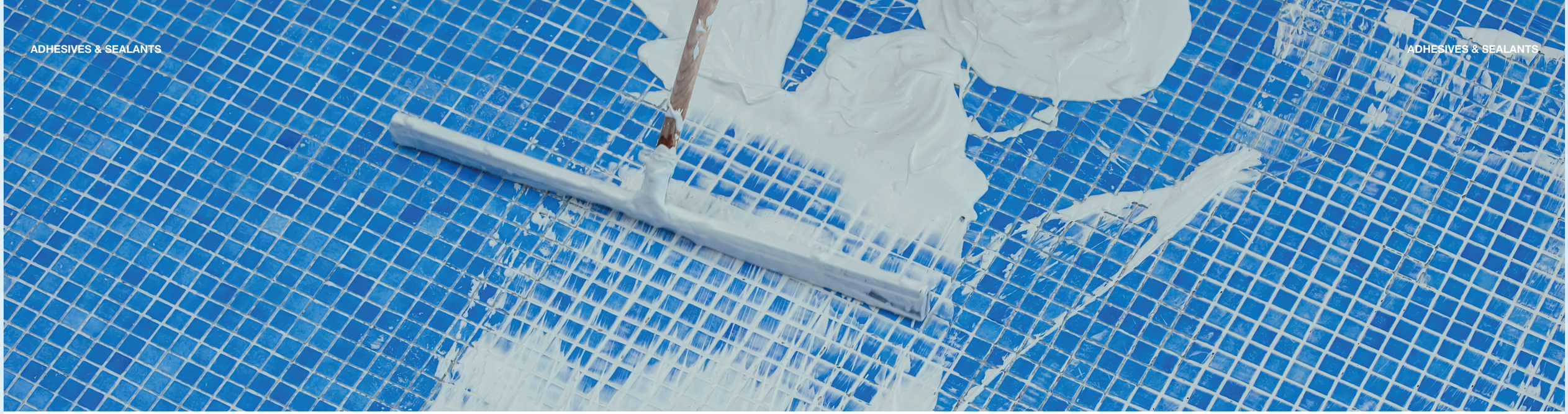
Key benefits:

- Imparting thixotropic flow characteristics
- Excellent stability avoiding phase separation and sedimentation
- Film/bead (thickness) control; slump resistance
- Suspension of particles resulting in homogeneous matrix and smooth surfaces
- Workability - improved spray process/ extrusion
- Hectorite is a material of natural origin, and we use environmentally friendly extraction procedures and strict zero waste and circular policy in cleaning and milling procedures.

Product name	Description	Key benefits	Shear rate		
			Low	Medium	High
BENTONE EW	Purified and highly beneficiated hectorite clay	Imparting strongly thixotropic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging). Ideal also for spray application.	••		
BENTONE® DE	Modified hectorite clay	Imparting strongly thixotropic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging). Ideal also for spray application and orientation of effect pigments. Option for pregels with loading up to 14% hectorite clay and still pourable intermediate.	••		
BENTONE® DY	Organically modified smectite clay	Improvement of storage stability (anti -syneresis; anti-settlement); especially for pigment and filler preparations. Stable in systems in a wide range of pH 1-12.	•	•	
BENTONE® LT	Organically modified hectorite clay	Imparting strongly thixotropic flow characteristics and suspension control resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging) and improved application properties ("application feel") due to impact on mid-shear-viscosity.	••	•	
BENAQUA® 4000	Modified hectorite clay	Influence on low- and mid-shear-viscosity and fast viscosity/ structure recovery in combination with suspension control resulting in storage stability (anti-sedimentation), film-thickness control (slump resistance) for textured and high-built systems. Partial replacement of celluloce for less "stickiness" leading to improved application feel and stable slump resistance.	••	•	
BENTONE® CT	Hectorite clay	Imparting thixotropic flow characteristics and suspension control in construction systems resulting in storage stability (anti-sedimentation), film-thickness control (anti-sagging) and and improved workability by trowel, minimum 50% hectorite content.	••		

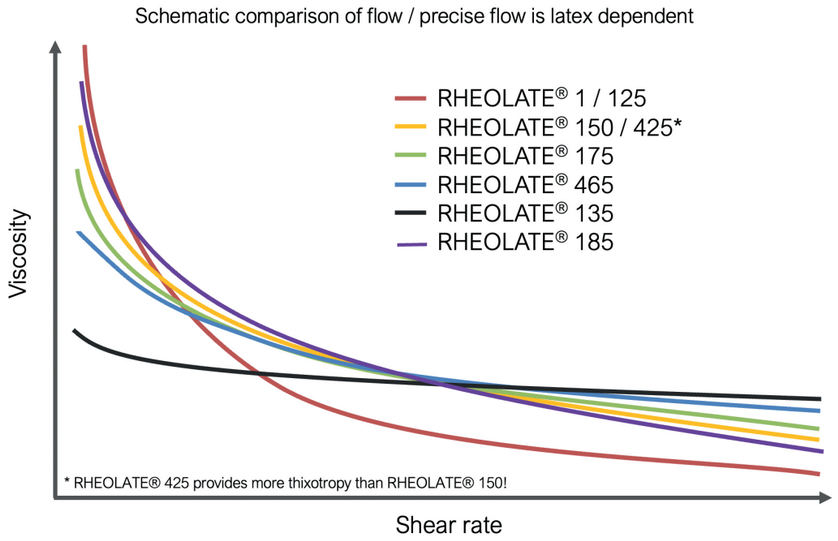
[1] Asian made additive [2] not suitable for EU •• high impact • medium impact

ADHESIVES & SEALANTS



RHEOLATE® acrylic thickeners

RHEOLATE® alkali swellable emulsion additives (ASE & HASE) are free-flowing water-based liquids, based on vinyl copolymer chemistry and are known for their ability to swell and thicken when neutralized with alkali.
They enhance viscosity building, flow and leveling, and being enzyme resistant, they give improved bio-stability.



Key benefits:

- Easy to incorporate into different stages of production
- Providing a uniform thickness and surface appearance
- Long-term stability in the final product
- Resistant to microbiological and enzyme spoilage

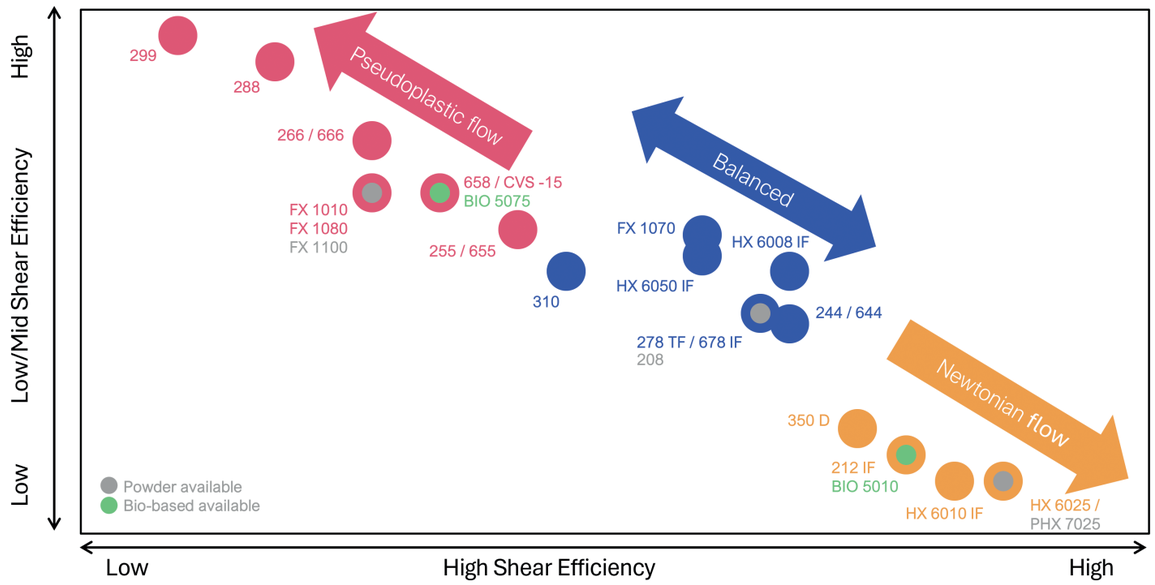
Product name	Description	Key benefits	Active %	Shear rate		
				Low	Medium	High
RHEOLATE® 1	Acrylic, ASE-type	High-Mid-Low-shear-viscosity builder; Replacement for HEC with improved sag resistance and less settling; specifically for low PVC systems.	30%	•	•	•
RHEOLATE® 125	Acrylic, ASE-type	Excellent low to mid-shear-viscosity builder providing pseudoplastic flow properties resulting in perfect spray application.	25%	•	•	
RHEOLATE® 150	Acrylic, HASE-type	Very good low-shear-viscosity builder. Cost-effective alternative to high-molecular-weight HEC with good sag/levelling balance.	30%	•	•	
RHEOLATE® 425	Acrylic, HASE-type	Excellent mid-shear-viscosity builder. Good balance of KU/ICI viscosities for sag resistance and anti-settling. It provides more thixotropy than R 150.	30%		•	
RHEOLATE® 175	Acrylic, HASE-type	Excellent mid-to high-shear-viscosity builder providing excellent film build, leveling and spatter resistance.	30%		•	•
RHEOLATE® 185	Acrylic, HASE-type	Excellent low to mid-shear-viscosity builder developed to replace HEC. Imparting shear-thinning flow for sag resistance and anti-settling.	30%	•	•	
RHEOLATE® 135 [2]	Acrylic, HASE-type	Very Newtonian and provides mainly high shear rate viscosity. Excellent storage stability, alkyd-like flow and leveling, improved moisture resistance over other acrylic and cellulosic thickeners, excellent brush drag, improved applied hiding, superior spatter resistance.	25%			•
RHEOLATE® 465	Acrylic, HASE-type	Mid and High-shear-viscosity builder providing unique flow and leveling properties in roller applied formulations. Highly efficient in systems with small particle size emulsions.	30%		•	•

[1] Asian made additive [2] not suitable for EU

ADHESIVES & SEALANTS

RHEOLATE® nonionic synthetic associative thickeners (NiSATs)

Elementis'RHEOLATE® nonionic synthetic associative thickeners (NiSATs) consist of hydrophobically modified ethoxylated polyurethanes and hydrophobically modified polyether polyols. Both ranges of NiSATs represent advanced technology for waterborne systems and provide superior rheological performance and excellent balance of thickening efficiency. Being non-ionic, they can be used across a broad pH spectrum, making them suitable for a wide range of formulations. These rheological additives do not require special activation and can be added at various stages of the production process.



Key benefits:

- Large portfolio to finetune every formulation to its application requirements
- Perfect levelling and adequate transfer to substrate
- Improved atomization/creation of very fine droplets
- Uniform film/bead thickness
- Suitable for systems with pH 2-12
- No negative impact on water resistance and corrosion resistance
- RHEOLATE® Powder NiSAT with 100% active content for improved sustainability

RHEOLATE® BIO NiSAT with > 90% Bio-based carbon content certified

With a market demanding higher performing, safer and more sustainable solutions. Elementis offer 2 new ranges of RHEOLATEs®.

RHEOLATE® Powder NiSATs. These are our answer to safer ingredients, saving resources (no solvents, surfactants and preservatives added), less storage space requirement, and consequently a lower carbon footprint on transportation. Our 100% solid powders can easily be incorporated into Water-based formulations, and increased efficiency while meeting the latest health and safety requirements.

RHEOLATE® BIO NiSATs. Additives that bring verifiable bio-based content to your formulations with up to 92% bio-based C14 content and Broad ecolabeling compliance. Easy incorporation and use showing exceptional rheological and leveling performance, almost identical to their fossil-based countertypes. Low odor and good storage stability.

Product name	Chemistry	Key benefits	Shear Rate		
			Low	Medium	High
RHEOLATE® HX 6010 IF	Polyether polyurethane	Highly efficient high-shear-viscosity builder; Use for roller/ brush application resulting in exceptional application properties like material transfer. Often used in combination with RHEOLATE® NiSAT grades like RHEOLATE® 666 or RHEOLATE® CVS-15 for ideal balance of properties. IF-version: isothiazolinone free.			••
RHEOLATE® PHX 7025	Polyether urea polyurethane, powder version	Highly efficient high-shear-viscosity builder; Use for roller/ brush application resulting in exceptional application properties like material transfer. Powder version for sustainable formulations.			••
RHEOLATE® 212 IF	Polyether urea polyurethane	High-shear-viscosity builder with little influence on mid-shear-viscosity. In roller applied paints often used in combination with NiSAT grades like RHEOLATE® 666, RHEOLATE® CVS-15 for ideal balance of properties. IF-version: isothiazolinone free.		○	•
RHEOLATE® BIO 5010	Polyether urea polyurethane, bio-based	High-shear-viscosity builder with little influence on mid-shear-viscosity. In roller application often used in combination with NiSAT grades like RHEOLATE® BIO 5075. 92% biobased carbon content and isothiazolinone free.		○	•
RHEOLATE® 350 D	Polyether polyol	High-shear-viscosity builder with impact on mid-shear-viscosity; specifically for roller and brush application/ self-levelling. Due to specific chemistry the performance of the product is less impacted by other formulation components like surfactants etc.	○	•	••
RHEOLATE® HX 6008 IF	Polyether polyurethane	Highly efficient high-shear-viscosity builder with significant mid-shear-viscosity contribution; often as single thickener in use; especially for smaller particle size binder emulsions (acrylic, styrene-acrylic, AQ-alkyd, PU, etc). IF-version: isothiazolinone free.		•	••
RHEOLATE® FX 1070	Polyether polyurethane	Efficient high- shear-viscosity builder with significant mid-shear-viscosity contribution. Also for systems with low NVC or resin-free pigment concentrates.	○	•	••
RHEOLATE® 244	Polyether urea polyurethane	High-to medium-shear-viscosity builder.		•	••
RHEOLATE® 644 IF		VOC-reduced and isothiazolinone free version of RHEOLATE® 244.		•	••
RHEOLATE® 278 TF	Polyether urea polyurethane	Mid-/high-shear-viscosity builder.		••	•
RHEOLATE® 678 IF		VOC-reduced and isothiazolinone free version of RHEOLATE® 278 TF.		••	•
RHEOLATE® 208		Mid-/high-shear-viscosity builder; often as single thickener in use. Powder version for sustainable formulations.		••	•
RHEOLATE® 310 D	Polyether polyol	Excellent mid-shear viscosity builder. Less sensitive to higher HLB surfactants and to coalescents. Due to specific chemistry the performance of the product is less impacted by other formulation components like surfactants etc...		•	
RHEOLATE® HX 6050 IF	Polyether polyurethane	Highly efficient high-shear-viscosity builder for larger particle size binder systems with good mid-shear-viscosity contribution. Especially for systems using larger particle sized binders (e.g. VAE, vinyl-ester). IF-version: isothiazolinone free.		•	••

(1) Asian made additive (2) not suitable for EU •• highly recommended • recommended ○ suitable

Product name	Chemistry	Key benefits	Shear Rate		
			Low	Medium	High
RHEOLATE® 255	Polyether urea polyurethane	Mid-shear-viscosity builder with slight impact on low-shear-viscosity. “Allrounder”.		•	
RHEOLATE® 655 IF		VOC-reduced and isothiazolinone free version of RHEOLATE® 255.		•	
RHEOLATE® CVS®-15	Polyether polyurethane	Special mid-shear-viscosity builder for tinting systems providing reduced KU-drop upon tinting.	•	•	
RHEOLATE® 658	Polyether urea polyurethane	Low-/mid-shear-viscosity builder, especially with small particle-size binders; for combination with high-shear-thickener and for roller/brush application.	•	•	
RHEOLATE® BIO 5075	Polyether urea polyurethane, bio-based	Mid-shear viscosity builder, especially with small particle-size binders; for combination with high-shear-thickener RHEOLATE® BIO 5010 and for roller/brush application. 90% biobased carbon content.	•	•	
RHEOLATE® FX 1010	Polyether polyurethane	Low-shear-viscosity builder. Also for systems with low NVC or resin-free pigment concentrates.	•	○	
RHEOLATE® FX 1080		VOC-reduced version of RHEOLATE® FX 1010.	•	○	
RHEOLATE® FX 1010	Polyether polyurethane	Low-shear-viscosity builder. Also for systems with low NVC or resin-free pigment concentrates.	•	○	
RHEOLATE® FX 1080		VOC-reduced version of RHEOLATE® FX 1010.	•	○	
RHEOLATE® FX 1100		Powder version of RHEOLATE® FX 1010 for sustainable formulations.	•	○	
RHEOLATE® 266	Polyether urea polyurethane	Low-shear-viscosity builder for combination with high-shear-thickener; specifically for roller/brush application.	•	○	
RHEOLATE® 666 IF		VOC-reduced and isothiazolinone free version of RHEOLATE® 266.	•	○	
RHEOLATE® 288	Polyether urea polyurethane	Highly efficient low-shear-thickener that provides excellent sag resistance during spray application.	••		
RHEOLATE® 299	Polyether urea polyurethane	Most efficient low-shear-thickener providing strongest pseudoplastic flow behaviour resulting in perfect atomization during industrial spray application; also suitable for dip application where homogeneous film-thickness is required.	••		

(1) Asian made additive (2) not suitable for EU •• highly recommended • recommended ○ suitable

ADHESIVES & SEALANTS

NUOSPERSE®, DISPONER and SUPREAD™

Nuosperse wetting and dispersing agents are essential for achieving uniform dispersions of pigments and fillers in water-based Adhesives and sealants formulations. They improve stability of final product which directly impacts the quality and durability of the final application.

Key benefits:

- Rapid filler/pigment wetting
- Good flow at high filler/pigment loading
- Long-term viscosity stability
- Excellent anti-settling performance and flocculation resistance

Product name	Chemistry	Key benefits
NUOSPERSE® FX 605	Polyacrylic (NaOH-neutralized)	Efective dispersant agent for hydrophilic pigments and extenders.
NUOSPERSE® FX 7500W (1)	Polymeric	Universal dispersant for all kind of pigments in resin-free pigment preparations; excellent color strength and stabilization of carbon black pigments.
NUOSPERSE® FN 260	Nonionic surfactant	Wetting agent for organic and inorganic pigments and fillers with low foam stabilization.
NUOSPERSE® FN 270	Nonionic surfactant	Wetting agent for pigments and fillers with low foam stabilization, hydrophilic.
DISPONER W-18 (1) (2)	Nonionic surfactant	Wetting agent for pigments and fillers, hydrophilic.
DISPONER W-518 (1) (2)	Ammonium salt of a polyacrylic acid	Low foaming polymeric dispersing agent which works effectively for a wide variety of pigments and extenders.
SUPREAD™ 3410 (1) (2)	Modified polysiloxane	Low foaming substrate wetting agent, excellent surface tension reduction.

(1) Asian made additive (2) not suitable for EU

DAPRO®

Elementis' range of specialty additives, including defoamers and coalescent agents, is specially formulated for aqueous system applications. DAPRO® defoamers are based on a variety of active materials to provide air release and bubble-breaking for most applications.

Key benefits:

- Excellent Antifoaming and defoaming properties
- Long/term efficiency
- Good compatibility and easy to use and incorporate

Product name	Chemistry	Key benefits	Defoamer	Coalescent
DAPRO® DF 17	Blend of mineral oil and hydrophobic particles	Defoamer for all kind of adhesives; siloxane-free.	•	
DAPRO® DF 21	Blend of hydrophobic silica and mineral oil	Effective defoaming; particularly useful in sensitive formulations due to its relatively good compatibility.	•	
DAPRO® FX 514	Proprietary blend	Reduction of MFFT (minimum film-formation-temperature) with plasticizer function.		•
DAPRO® BIO 9910 (1)	Vegetable oil	Relatively good compatibility while providing good defoaming properties and very good long-term efficiency. For sustainable formulations.	•	
DAPRO® AP 7015 (1) (2)	Dispersion of wax in mineral oil	Works across a wide range of waterborne systems, good compatibility and water dispersibility, excellent foam control, no phase separation.	•	
DAPRO® DF 677 (1) (2)	Silicone emulsion	Excellent compatibility, ease of use and incorporation, cost effective, wide application range.	•	
DAPRO® DF 7072 (1) (2)	Blend of hydrophobic silica and mineral oil	Excellent foam suppression and antifoaming performance, good compatibility and dispersibility, persistent defoaming action.	•	
DAPRO® AP 7160 (1) (2)	Dispersion of wax in mineral oil	Excellent compatibility and water dispersibility, good foam control.	•	

(1) Asian made additive (2) not suitable for EU

For more details
please contact:

North America
ELEMENTIS
469 Old Trenton Road
East Windsor,
NJ 08512, USA
Tel: +1 609 443 2500

Europe
ELEMENTIS UK Ltd c/o
Porto Business Plaza
Santos Pousada Street, 290
4300-189, Porto, Portugal

Asia
Deuchem (Shanghai) Chemical
Co, Ltd., 99 Lianyang Road
Songjiang Industrial Zone
Shanghai, China 201613
Tel: +86 21 577 40348

www.elementis.com

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Unique chemistry, sustainable solutions