ARKEMA

WEBINAR

RHEOLOGY & SPECIALTY ADDITIVES

For the Building Industry

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Global Business Manager
Rheology & specialty additives
COATEX and CRAYVALLAC

20 JAN.

Highlights on rheology and specialty additives for construction & building materials such as adhesives, sealants, plasters & renders

Product families

Discover our product families

Our range of additives is designed to help formulators meet challenges of solvent-free, solvent-based and waterborne **coatings, adhesives & sealants**

Rheology modifiers

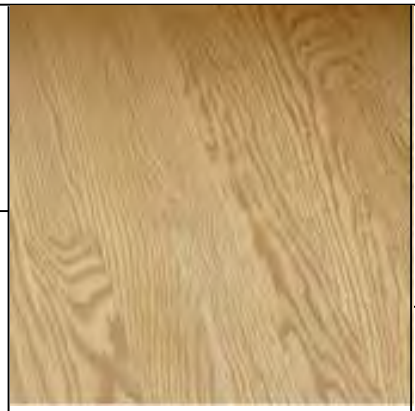
To control flow behavior sedimentation and sag resistance

RHEOTECH™
THIXOL™
COAPUR™
VISCOATEX™
CRAYVALLAC®

Dispersing agents

To optimize dispersion and wetting of pigments and fillers

ECODIS™
COADIS™
CRAYVALLAC®



Surface modifiers

To customize surface aspect or properties of coatings and inks

CRAYVALLAC®

Flow & Leveling agents

To improve film aspect, leveling and gloss

CRAYVALLAC®

Rheology & Specialty Additives: a wide offer

COAPUR™

Solvent free liquid polyurethane thickeners for water-based systems
HEUR polyurethane thickeners

RHEOTECH™

Acrylic associative thickeners for water-based systems
HASE acrylic thickeners

THIXOL™

Acrylic thickeners and anti-settling & anti-sagging agents
ASE acrylic thickeners

VISCOATEX™

Acrylic thickeners for water-based systems
ASE acrylic thickeners

ECODIS™

Dispersing agents for water-based systems
Ionic homopolymer dispersants

COADIS™

Dispersing agents for waterborne systems
Ionic & non ionic copolymer dispersants

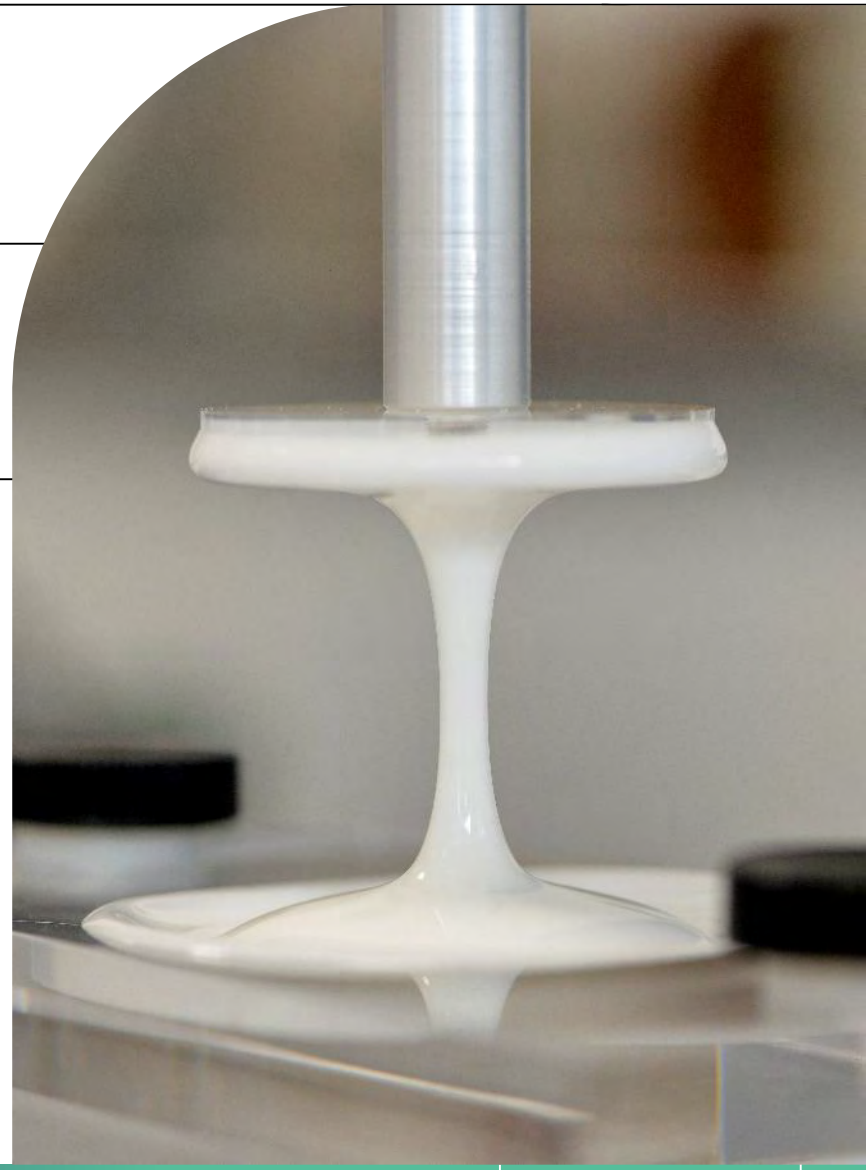
CRAYVALLAC®

Rheology modifiers
- Organic powders for solvent-based and solvent-free systems
- Polyamide pre-activated pastes for solvent-based or reactive systems
- Liquid additives for solvent-based, reactive and waterborne systems

Surface modifiers
- Micronized powders or dispersions of micronized powder in water or organic solvents.

Flow & leveling agents
- For solvent-borne and solvent-free systems

Dispersing agents
- Solvent-based polymeric and dispersing agents



Our solutions

Dedicated solutions for every market need

Sustainable and **innovative** solutions for adhesives & sealants.

Their **high performance** and key benefits will enhance:

- The manufacture
- The stability
- The ease of application
- The final properties of adhesives & sealants formulations

Adhesives & Sealants

- Facades / Panels
- Tile adhesives
- Flooring adhesives
- Sealants
- Putties
- Multi-purpose

Coatings

- Architectural coatings
- Plaster
- Renders
- Industrial coatings
- Protective & Marine Coatings

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Rheology & Specialty Additives **For Adhesives & Sealants**

Rheology & Specialty Additives for Adhesives & Sealants

CRAYVALLAC® SLW

Micronized amide wax rheology modifier especially designed for high tack, adhesives & sealants

Sustainability

- Biosourced >60%
- Solvent-free systems

Easy to use

- Workability
- Gunnability & extrudability
- Tack properties

Performance

- Storage stability
- Body and structure
- Slump resistance
- Modulus
- Compatibility & versatility

Rheology & Specialty Additives for Adhesives & Sealants

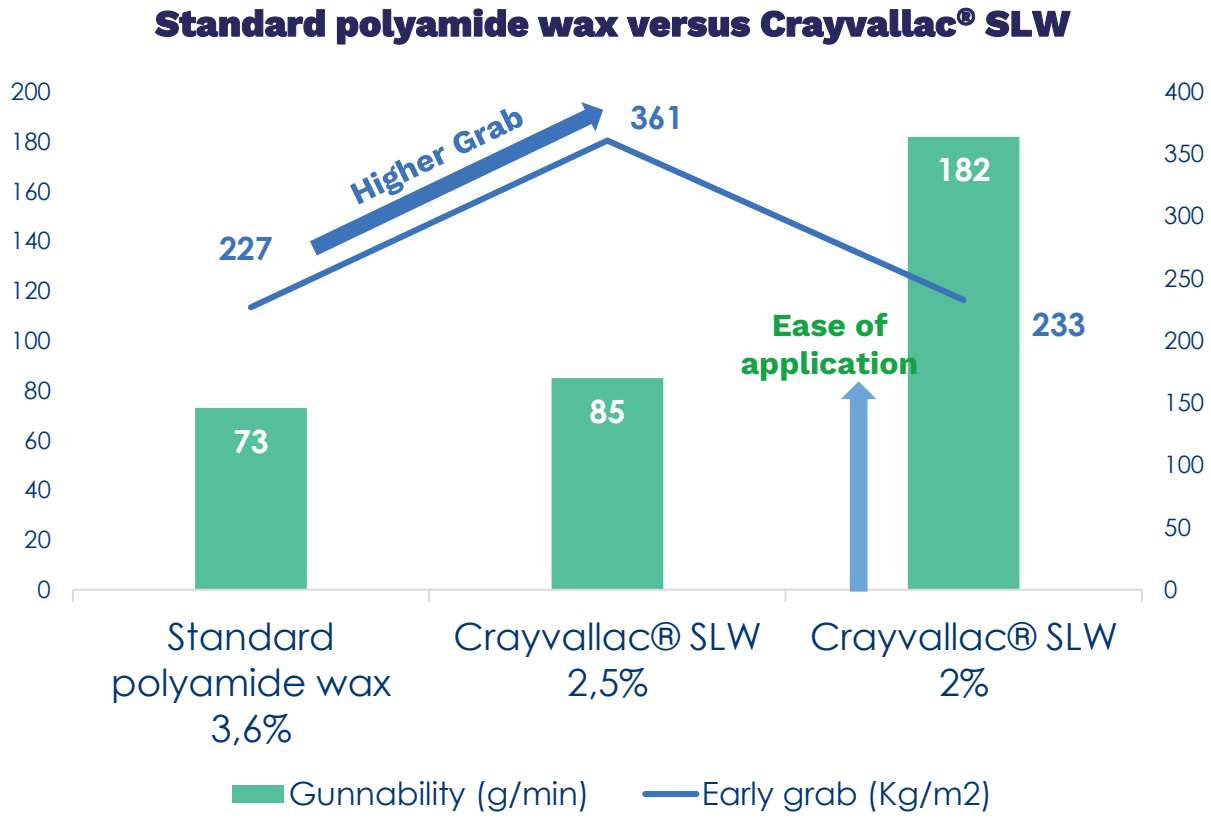
Higher grab...

Improved body, grab & excellent extrudability

BODY DEVELOPMENT

HIGHER EXTRUDABILITY

HIGHER GRAB



Rheology & Specialty Additives for Adhesives & Sealants

After 30 s

After 12 min

Higher tack…

Corresponding early grab limit

Crayvallac® SLW => Passed => time>12min

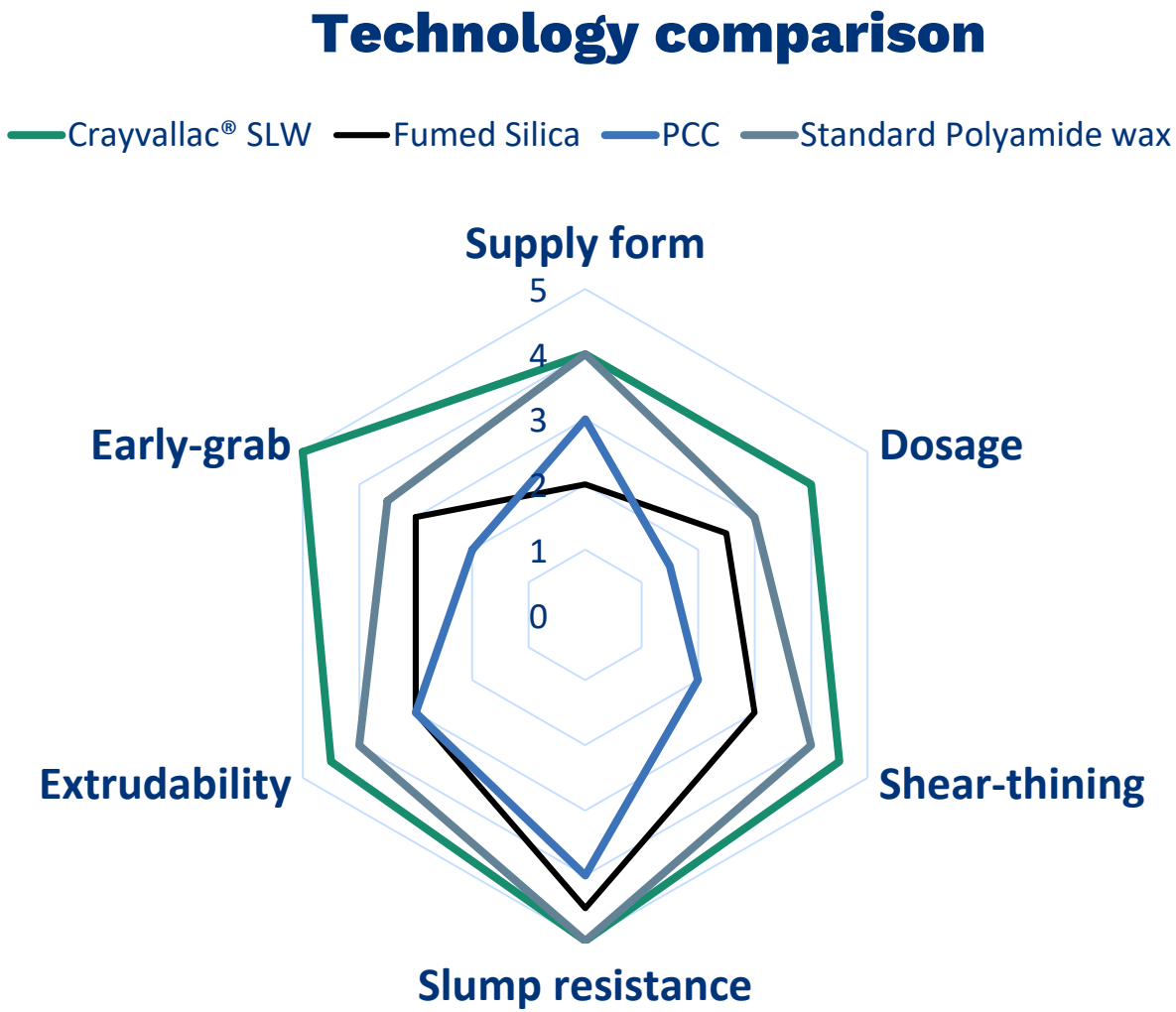
Market benchmark => Failed => time<36s

Note: Both samples were activated at 60-65°C and 2,5 wt% in high tack typical formulation

Rheology & Specialty Additives for Adhesives & Sealants

Higher tack...

Comparing **Crayvallac® SLW** usage and performance in high tack systems to Fumed Silica, Standard polyamide wax & PCC



Rheology & Specialty Additives for Adhesives & Sealants

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Rheology & Specialty Additives
For Tile adhesives

Rheology & Specialty Additives for Tile adhesives

VISCOATEX™ 560

Non associative thickener designed for use in adhesives, paints, sealants & mastics

Sustainability

- Formaldehyde free
- APEO free
- Heavy metal free
- Solvent free

Easy to use

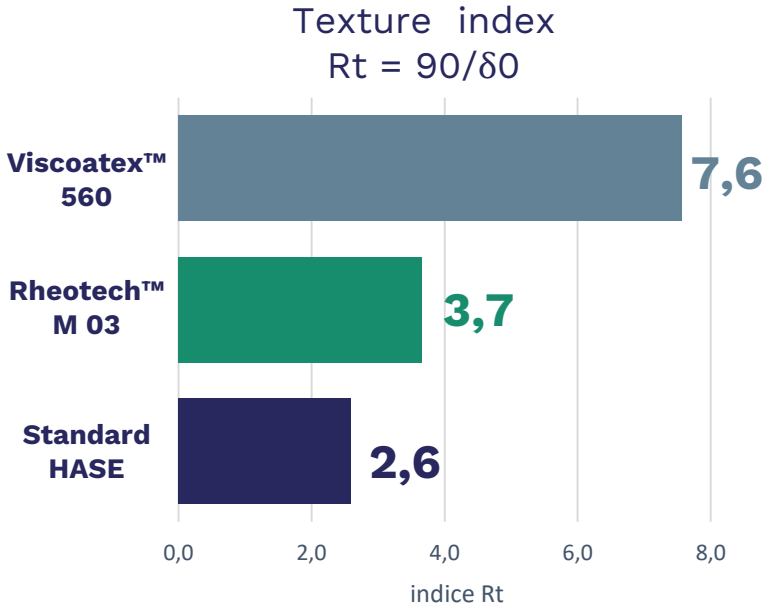
- Stiff texture
- Soft solid
- High drip resistance
- Good sag resistance

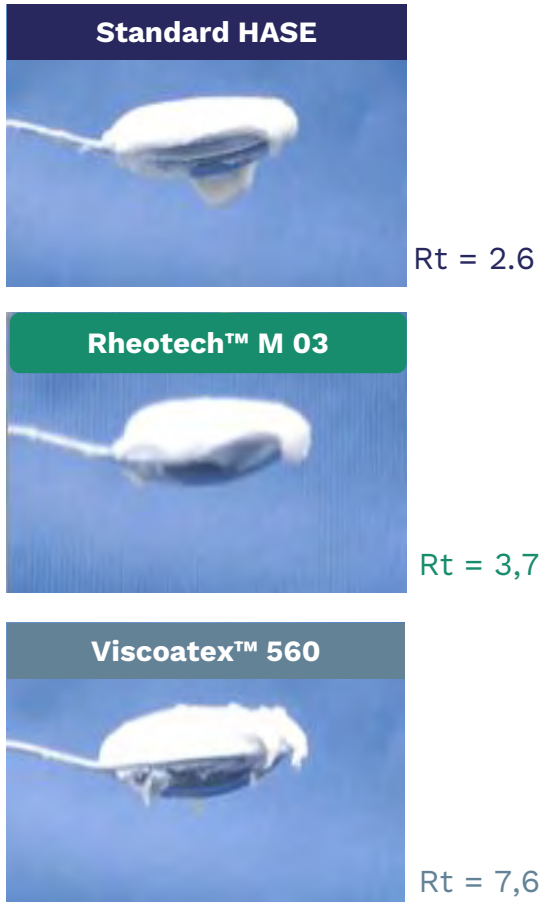
Performance

- Robustness
- Excellent thickening
- Good shear thiinning
- Good hold up
- Slump resistance

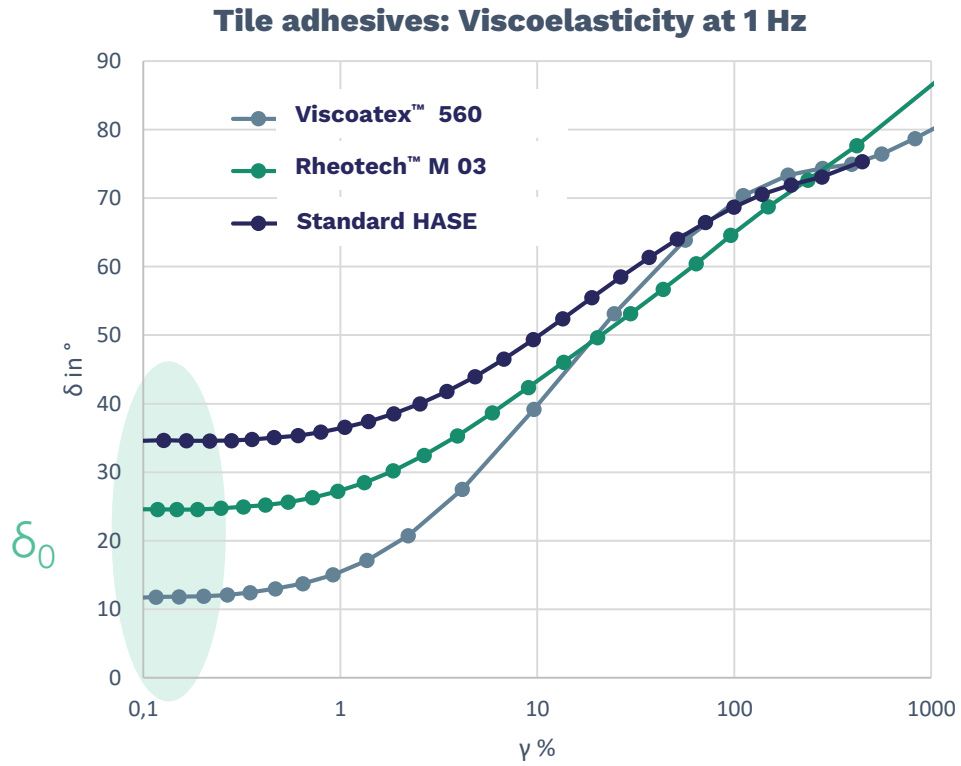
Rheology & Specialty Additives for Tile adhesives

Texture in can...





All adhesives were adjusted at the same Brookfield viscosity @5rpm after 24h



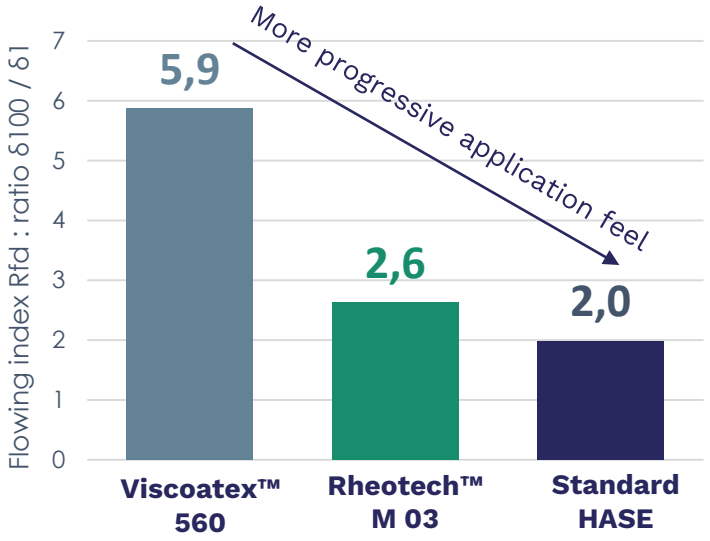
Good correlation between the visual aspect of the tile adhesives at rest and the texture index Rt

Rheology & Specialty Additives for Tile adhesives

Drip resistance…

Flowing index Rfd = δ100 / δ1

Rfd - transition elastic to viscous



All adhesives were adjusted at the same Brookfield viscosity @5rpm after 24h

Standard HASE

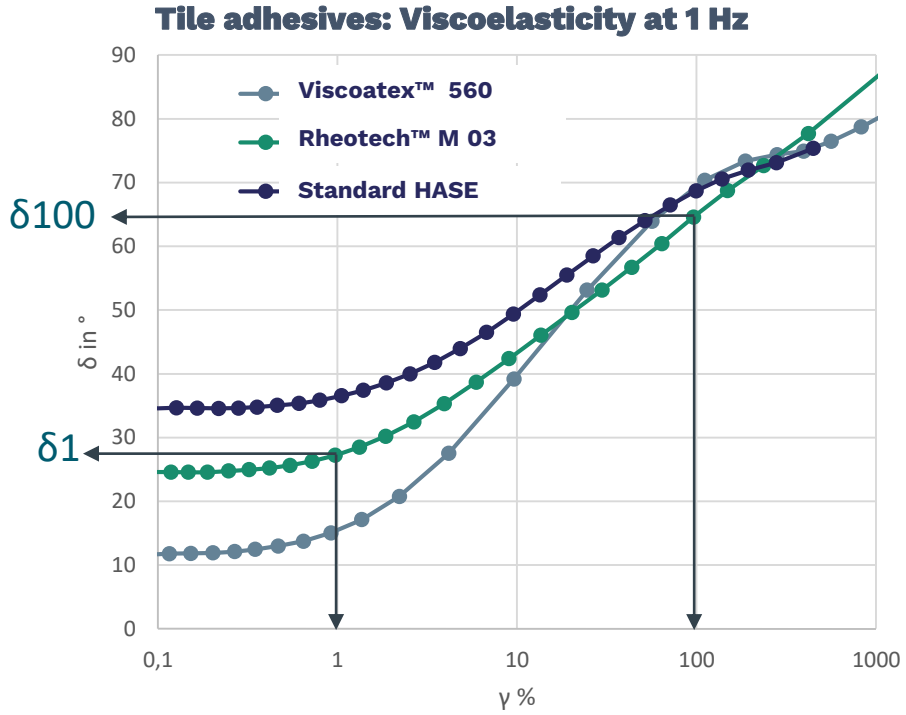
Rfd = 2.0

Rheotech™ M 03

Rfd = 2.6

Viscoatex™ 560

Rfd = 5.9

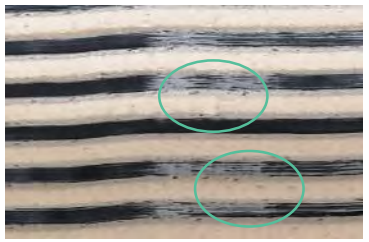
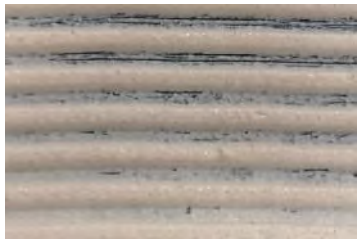
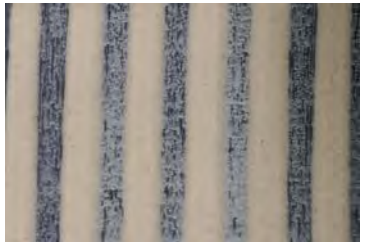


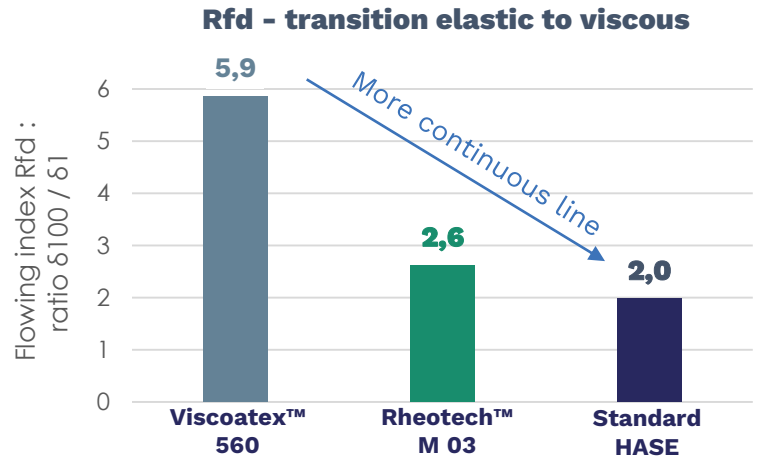
The lower the Rfd index, the more progressive the application feel, due to a progressive transition from the elastic state to the viscous one

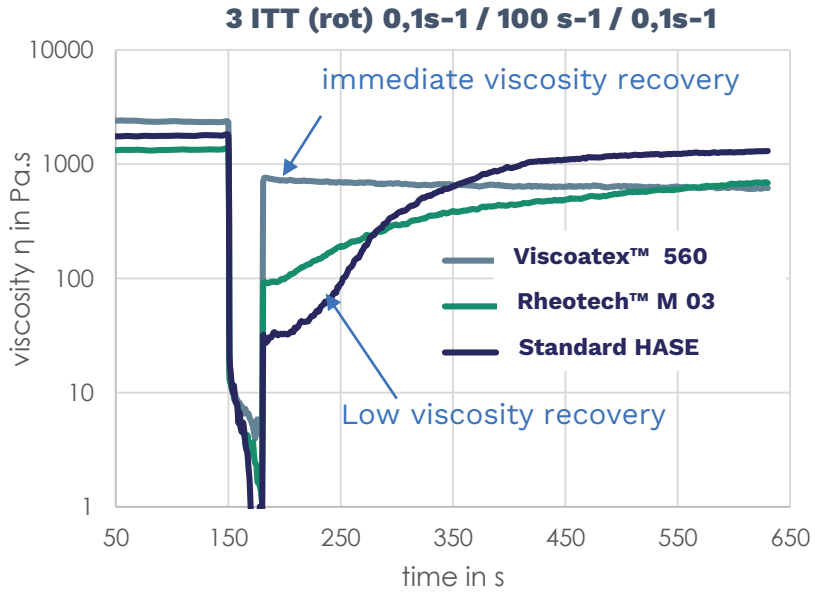
Rheology & Specialty Additives for Tile adhesives

Sag resistance…

All adhesives have the same Brookfield viscosity @5rpm after 24h

	Viscoatex™ 560	Rheotech™ M 03	Standard HASE
At t0	 Discontinuous lines	 Continuous lines	 Continuous lines
After 10 min			





Rheology & Specialty Additives for Tile adhesives

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Rheology & Specialty Additives
For Putties

Rheology & Specialty Additives for Putties

RHEOTECH™ M 03

Associative acrylic thickener suitable for use in water-based putties and textured paints, and is a real alternative to cellulosic thickener

Sustainability

- VOC free
- APEO free
- Designed for alkaline water-based formulations

Easy to use

- Low water absorption
- Strong texture
- High body
- Smooth application feeling
- Easy to apply

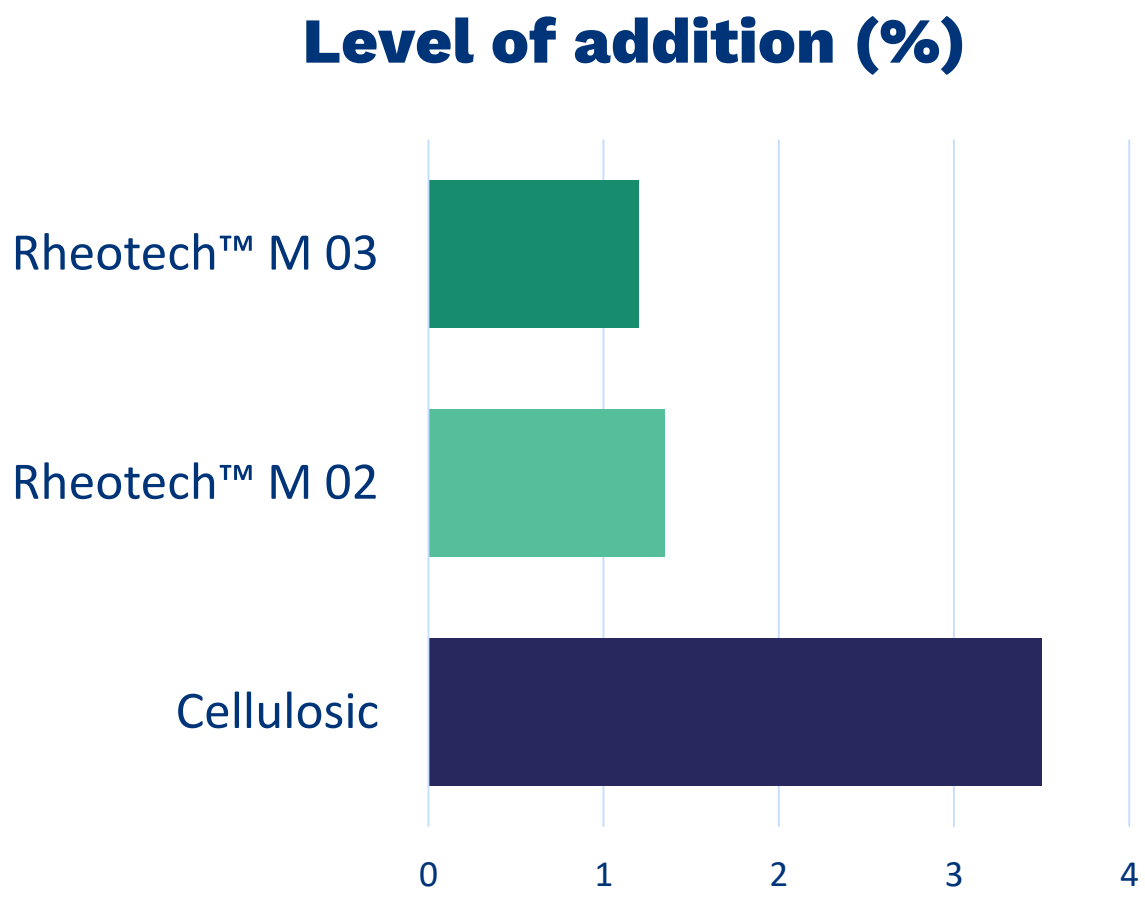
Performance

- Cost efficient alternative to cellulosic thickeners
- High thickening performance
- Viscosity build

Rheology & Specialty Additives for Putties

High efficiency with low level of addition…

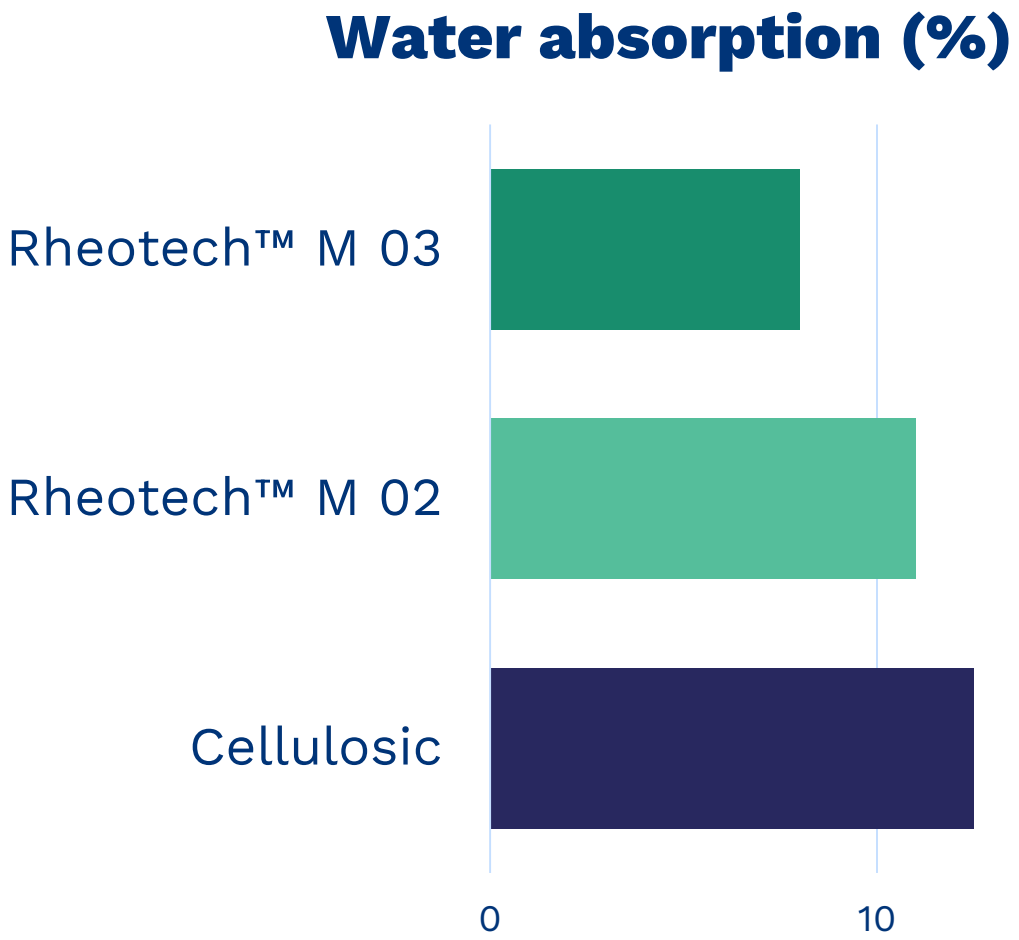
The dosage of **Rheotech™ M 03** required for a given putty consistency (6,5 cm) is among the lowest which highlights its appreciable cost effectiveness



Rheology & Specialty Additives for Putties

Lower water absorption...

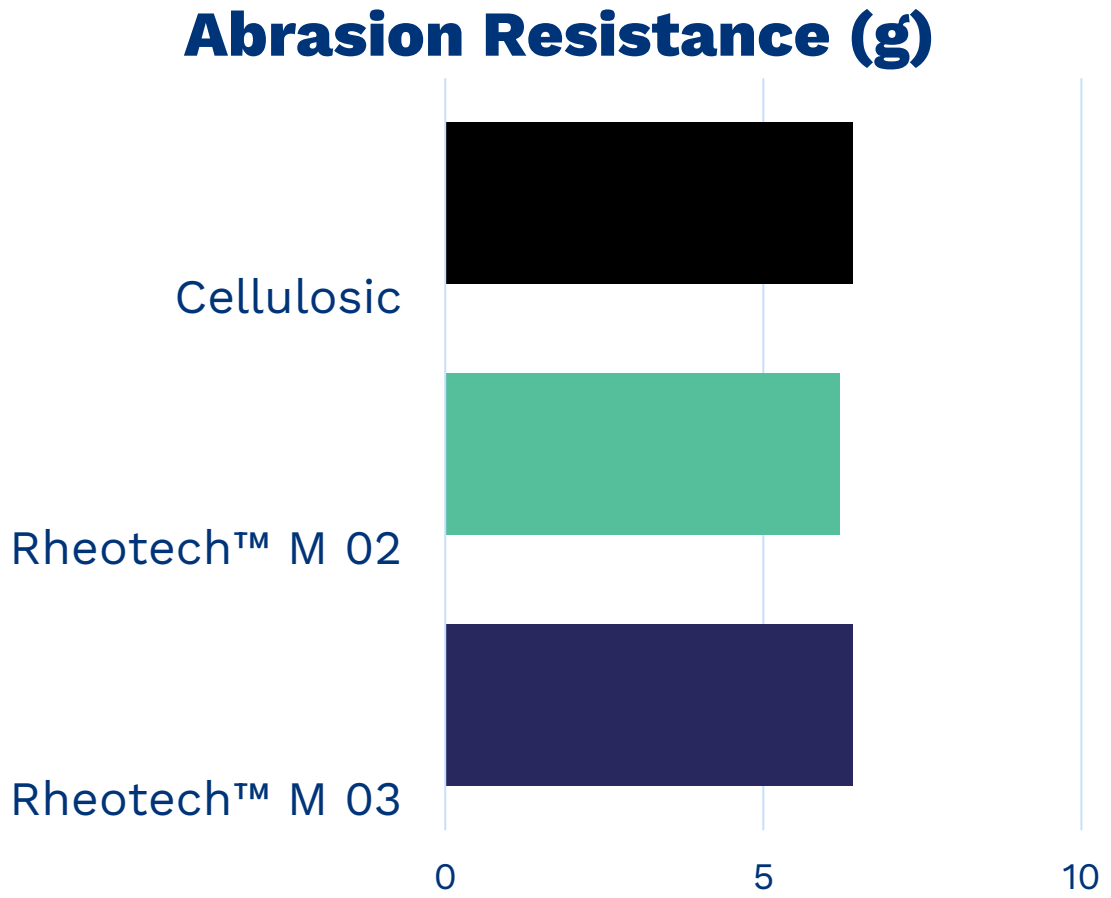
Rheotech™ M 03 is especially designed for formulations aiming a good resistance to water absorption



Rheology & Specialty Additives for Putties

Excellent abrasion resistance…

Lower water absorption is not obtained to the detriment of mechanical properties: **Rheotech™ M 03** helps maintain the same high level of abrasion resistance as **Rheotech™ M 02** when used in putties.



Our key drivers for new developments

- Sustainability
- Robustness
- Workability
- Performance
- Innovation

To go further on our global offer

RHEOTECH™ VISCOATEX™ CRAYVALLAC®
COAPUR™ THIXOL™ COADIS™ ECODIS™

Rheology and specialty additives for Adhesives & Sealants

We offer a wide range of **sustainable** and **innovative** solutions for adhesives & sealants. Their **high performance** and key benefits will enhance the manufacture, the stability, the ease of application and the final properties of adhesives & sealants formulations.

DEDICATED SOLUTIONS **FOR EVERY MARKET NEED**

Consumer
- DIY
- Mirror adhesives
- Sanitary sealants
- Instant adhesives

Construction
- Facades / Panels
- Tile adhesives
- Flooring adhesives
- Multi-purpose

Industrial
- Automotive
- Marine
- Railway
- Assembly

Rheology modifiers and dispersants are key ingredients in adhesives & sealants formulations for more and more demanding end-uses. They will enable to fine-tune the processing, body and the structure, the gunnability and ease of application while keeping an excellent slump resistance without impacting ageing, mechanical properties and weatherability.

FORMULATION **ADDED VALUES**

Sustainability
- Biosourced
- Water-borne rheological solutions
- Solvent-free / Low VOC
- APEO free

Performance
- Storage stability
- Body and structure
- Slump resistance
- Modulus
- Compatibility & versatility

Easy to use
- Workability
- Gunnability & extrudability
- Tack properties
- Smoothness & Stiffness

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VISCOATEX™

Technical Flyer

Rheological solutions for thick adhesives

Viscoatex™ 560 is a non associative acrylic thickener designed for use in adhesives, paints, sealants & mastics which allows to:
- Improves robustness versus variations of ingredients such as latex type, surfactant and co solvent
- provides excellent thickening , good shear thinning and very good hold up or slump resistance

FORMULATION

Raw material	Quantity (%)
Axilat® DS 910	18
Water	6.6
Butyldiglycol	1.4
Acticide® MBS	0.2
Tego® Foamex 810	0.1
Durcal® 130	48
Omyacarb® 2 AV	24
NH_4OH (28%)	0.2
Viscoatex™ 560	0.8
Water	2,7
NH_4OH (28%)	to achieve pH = 8,5
TOTAL	**100**

VISCOATEX™ 560

Stiff texture | Soft solid | High drip resistance | Good sag resistance

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CRAYVALLAC®

Technical Flyer

New polyamide rheological modifier for high tack systems

Crayvallac® SLW is a high performance micronized amide wax rheology modifier especially designed for high tack adhesives & sealants.

Technology comparison

Crayvallac® SLW is mainly used in construction systems:
- **Chemical screws & bolts**
- **High tack systems**
- **Instant adhesives**
- **Material assembly**

Crayvallac® SLW achieves perfect compromise between viscosity build and gunnability.

CRAYVALLAC® SLW

Sustainability
- Biosourced >60%
- Solvent-free systems

Easy to use
- Workability
- Gunnability & extrudability
- High tack properties

Performance
- Storage stability
- Body and structure
- Slump resistance
- Low impact on modulus
- Compatibility & versatility

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THANK YOU FOR YOUR ATTENTION

Find out more on our website

Crayvallac.com
Coatex.com

- Ask questions to our experts
- Library – docs & webinars
- Web services – TDS – sampling
- Product Selectors & brochures

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