## ARKEMA

# RHEOLOGY & SPECIALTY ADDITIVES

FOR WATERBORNE
SYSTEMS
Coatings, Inks,
Adhesives & Sealants





### About us

## Arkema, a world leader in Specialty Materials

Building on unique set of expertise in materials science, Arkema designs specialty products that address ever-growing demand for innovation and sustainability. We are continuously looking for new ways to empower customers and industry leaders to address key challenges such as new energies, advanced technologies, dwindling natural resources, mobility innovation and urbanization trends

## **Coatings solutions**

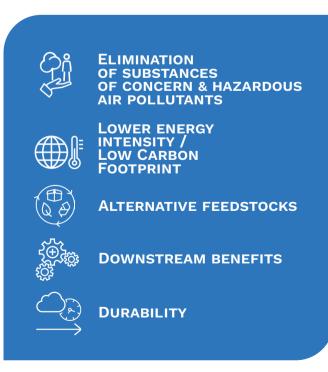
Arkema is a trusted partner, offering a wide range of specialty resins and additives for virtually every sector of the coatings industry. With decades of formulation expertise, Arkema helps customers produce performance-driven, sustainable coatings, adhesives, and inks that can meet the most stringent industry regulations.



# Make your formulations more sustainable!

For the world to change, we must change the materials we use. Thus, with our partners, we are continuously innovating to offer to our customers a wide variety of options to advance sustainability and performances. To move toward a more circular and lower carbon economy we look at both how the product is designed and how it enables the downstream performances. Hence, in addition of improving our product safety, our experts are committed to developing solutions using more renewable resources and lowering energy

consumption across the value chain, while ensuring sustainable performances such as longer durability.



# RHEOLOGY & SPECIALTY ADDITIVES

World leading designer and producer of additives for Coatings, Paints, Inks, Adhesives & Sealants

Customer intimacy, simplicity and reactivity as competitive edges. Our expertise is based on the rheology, the dispersion and the texture of complex formulations. Our solutions will optimize processing, stability and application properties of formulated systems. Discover our full range of rheology and specialty additives.

**Sustainability** 

### **Performance**

Design to offer sustainable & performing solutions



Manage our activities as a responsible specialties manufacturer

- Clean processes based on water
- Low carbon footprint
- Sustainability portfolio assessment
- Proactive elimination of hazardous components
- Bio-sourced and biorenewable solutions

### **Innovation**

Cultivate open dialogue and close relations with our customers



- Additives with high active content up to 100%
- Higher efficiency, use less
- Designed for low and zero VOC systems
- High value pigments optimization
- Solutions for fine-tuned rheology



- Strong partnerships with major players of the Industry
- More than 5 new additives every year
- Global RD&I and regional application labs to provide fast reactivity to specific needs

## Expertise



# for waterbased systems

The choice of the right thickeners is a key step designing waterborne formulations.

Rheology modifiers enhance major characteristics of formulations from production to the end-use.













#### **Dispersing agents**

From plasters to lacquers, dispersing agents will improve processing and long-term stability with the most demanding pigments and fillers. Dispersing agents will also contribute positively to film properties.











#### **WE OFFER SOLVENT, APEO, HEAVY METAL FREE AND BIO-BASED SOLUTIONS**

to Coatings, Adhesives & Sealants to achieve our common goals for a sustainable future.

## SUSTAINABLE GALS















Our solutions portfolio is analysed for UN sustainable development goals The method developed by Arkema is based on the methodological guide issued by the World Business Council for Sustainable Development and looks at the whole of the value chain

## Add drops of vitamins to your formulations

World leading designer and producer of water-based rheology and specialty additives. Our expertise is used across multiple markets.



## **Coatings & Inks**

Your needs are as unique as your waterborne formulations.

Rheological solutions are key to meet your requirements and offer additional benefits whatever the application mode, e.g. brush, roller, curtain, spray gun.

Architectural Plasters & renders **General industry Graphic arts Traffic paints** Textile & leather **Protective & marine** 



### **Adhesives & Sealants**

Rheology modifiers and dispersants will enable to fine-tune the body and the structure, the gunnability and ease of application while keeping an excellent slump resistance without impacting ageing, mechanical properties and weatherability.

Sealants Putties Adhesives **PSA Assembly** 



## **RHEOLOGY MODIFIERS**

## THICKENING MECHANISMS

#### WATER GELLING

- Viscosity increase at low shear rates
- Carboxylic acid groups interact with water and form a gel emphasized by chain entanglement

#### **ASSOCIATIVITY**

- Viscosity increase at high shear rates
- Hydrophobic end groups interact with the binder particles and/or their stabilizing systems by hydrophobic or ion-dipole interactions

## SELF-ASSEMBLY OR ASSOCIATION

- Viscosity increase at low shear rates
- Hydrophobic end groups interact with each others by hydrophobichydrophobic interactions
- Depending on the design of the hydrophobic end groups, a thixotropic behavior can be obtained



#### THICKENING TECHNOLOGIES

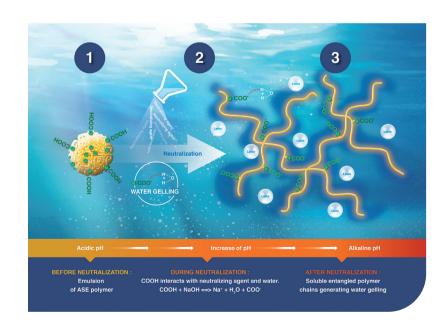
#### **ASE: Alkali Swellable Emulsions**

- Acrylic-type thickeners
- Backbone comprises carboxylic acid groups
- Need to be neutralized using an amine or an alkali solution in order to become water-soluble

Neutralized carboxylic acid groups + chain entanglement

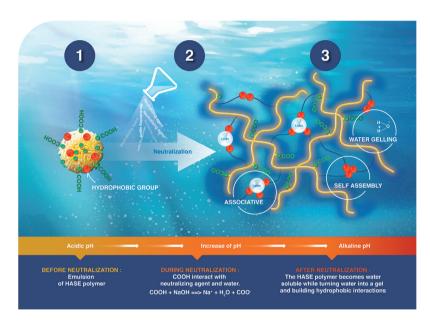
> Strong water gelling effect

Entanglement of ASE polymer chains



## HASE: Hydrophobically modified Alkali Swellable Emulsions

- Acrylic-type thickeners
- Backbone comprises carboxylic acid groups
- Need to be neutralized using an amine or an alkali solution in order to become water-soluble



Neutralized carboxylic acid groups

- + chain entranglement
- ▶ Water gelling effect

Hydrophobic end groups

**▶** Self-assembly mechanism

Hydrophobic end groups

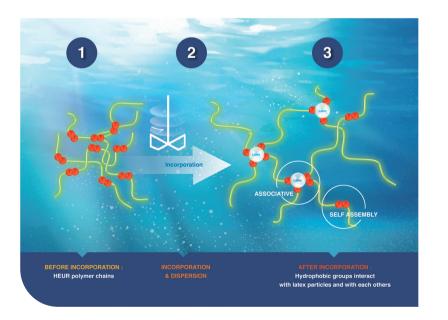
Associativity with binders

Associativity with biliders

HASE thickeners are therefore capable of selectively increasing viscosities in all ranges of shear rates

#### **HEUR: Hydrophobically Ethoxylated Urethane polymers**

- Polyurethane-type nonionic thickeners
- No specific pH adjustment
- Hydrophilic chain terminated by hydrophobic groups by means of urethane bond



Hydrophilic chain

**▶** Polymer solubility

Hydrophobic end groups

**▶** Associativity with binders

Depending on the design of the hydrophobic end groups

▶ Self-assembly mechanism

## COAPUR™ & COAPUR™

## RHEOLOGY MODIFIERS

A wide and comprehensive range of polyurethane thickeners from very Newtonian to pseudoplastic profiles. XS grades focus on tinting.

## Great application properties:

- Flow and leveling
- Application comfort
- Spatter resistance
- Color acceptance
- Water resistance
- Non ionic thickeners
- Less pH dependency
- Hydrophobicity

#### **KEY BENEFITS**

#### Water resistance

STANDARD THICKENER



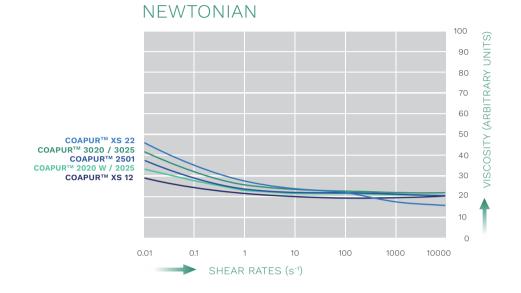
## Color acceptance & rub out

STANDARD HEUR

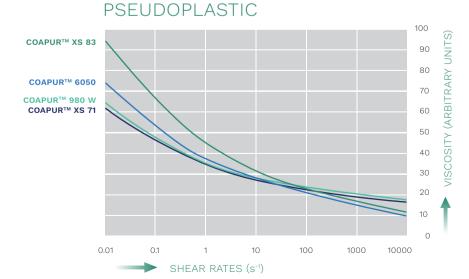












## **▶** HEUR: Polyurethane thickeners

		Bio-		Techn	ical dat	a		nickeni echanis			iscosit ntribut			Sustai-
	Products	content (%)	рН	Solids content (%)	Active content (%)	Sol- vent	Non asso- ciative	asso- asso- ciative Shear Shear Shear		High Shear	Main key benefits	nable attribute		
	COAPUR™ XS 22	NA	7	30	25	Water	••	•••	•••	•••	•••	•••	Compatibility • Syneresis resistance Spatter resistance • Rub out	NA
	COAPUR™ 3020 BB	90*	7	20	20	Water	••	•	•••••	•••	••	••••	Bio-based • Viscosity stability Film build • Leveling	
NEWTONIAN	COAPUR™ 3020 / 3025	NA	7	20 25	20 25	Water	••	•	•••••	••	••	•••••	Film build • Spatter resistance Viscosity stability • Anticorrosion	NA
NEWT	COAPUR™ 2501	NA	7	20	20	Water	••	•	•••••	••	••	••••	Film build • Spatter resistance • Viscosity stability • Compatibility • Anticorrosion	NA
	COAPUR™ 2020 W / 2025	NA	7	20 25	20 25	Water	•	•	•••••	•	•	••••	Leveling • Film build • Viscosity stability • Brushability • Compatibility	NA
	COAPUR™ XS 12	NA	7	25	20	Water	•	•	•••••	•	•	••••	Outstanding leveling • Viscosity stability Film build • Brushability • Compatibility	NA
	COAPUR™ 817 BB	93*	7	29	17.5	Water	••	•••	•••••	•••	••••	••••	Bio-based • Spatter resistance • Viscosity stability • Compatibility • Rub out	<b>#</b>
BALANCED	COAPUR™ 817 W / 830 W	NA	7	29 50	17.5 30	Water	••	•••	••••	•••	••••	••••	Good in-can feel • Spatter resistance Viscosity stability • Compatibility • Rub out	NA
BALA	BR 100 P	NA	5.5	50	50	Water BG	••	••	••••	•••	•••	•••	Easy handling • Viscosity stability Spatter resistance • Brushability • Gloss	NA
	COAPUR™ 520 W	NA	8	27	20	Water	••	••	••••	•••	•••	••••	Spatter resistance • Drip resistance Compatibility • Viscosity stability • Rub out	NA
	COAPUR™ XS 83	NA	7	50	30	Water	•••	••••	••	•••••	••••	•	Sag resistance • Antisettling Compatibility • Anticorrosion	NA
PLASTIC	COAPUR™ 6050	NA	6	50	30	Water	••••	•••	••	•••••	••••	•	Sag resistance • Antisettling Water resistance	NA
PSEUDOPLASTIC	COAPUR™ 980 W	NA	7	27	17.5	Water	•••	•••	••	••••	••••	••	In-can body • Compatibility • Sag resistance • Brushability	NA
	COAPUR™ XS 71	NA	7	29	17.5	Water	•••	•••	•••	••••	••••	••	Color acceptance & development • Sag resistance • Brushability • Rub out	NA

Alternative feedstocks - Low carbon footprint

From **Possible •** to **Highly recommended •••••** 

\*Ratio of bio-sourced biomass / Total product NF EN 16785







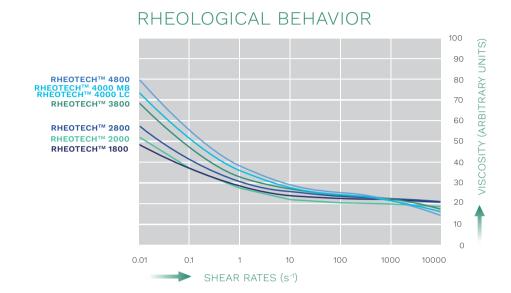
06

## RHEOTECH<sup>TM</sup> & RHEOTECH<sup>TM</sup> MB

RHEOLOGY MODIFIERS

A comprehensive range of HASE rheology modifiers providing key benefits to coatings & adhesives formulations throughout their use and application.

Additionally, they are easy to use and cost efficient.



#### **UPON STORAGE,**

Rheotech™ rheology modifiers bring:

- Premium in-can appearance
- Syneresis control
- Optimum behavior with tinting systems

#### **DURING APPLICATION,**

Rheotech™ rheology modifiers provide:

- Good sag resistance
- Spatter resistance
- High film build
- Sag resistance and leveling balance

These solutions offer excellent alternatives to HEC thickeners with better application properties.

#### **KEY BENEFITS**

#### Slump resistance WITH RHEOTECH™ M 03





#### Sag resistance RHEOTECH™ 4800



#### In-can texture SOFT/SMOOTH TEXTURE



WITH RHEOTECH™ M 03



### **HASE: Acrylic thickeners**

	Bio-	Technical data				hickenir echanis	_		/iscosit ntributi	-		Sustai-
Products	content (%)	pH Solids & Active content (%)		2000- 2000-		Asso- ciative	Low Mid Shear Shear		High Shear	Main key benefits	nable attribute	
RHEOTECH™ 1800	NA	3	30	Water	••	••	•••••	•• •••		•••••	Color acceptance • Syneresis resistance • Hiding power/Opacity Improved stain resistance	NA
RHEOTECH™ 2000	NA	3	30	Water	••	••	••••	••	••	••••	Color acceptance • Syneresis resistance • Dilution resistance Hiding power/Opacity	NA
RHEOTECH™ 2800	NA	3	30	Water	•••	•••	••••	••• •••		••••	Cost in use • Syneresis resistance Spatter resistance • Hiding power/Opacity	NA
RHEOTECH™ 3300	NA	3	30	Water	••••	•••	•••	••••			Storage stability • Syneresis resistance Spatter resistance • Hiding power/Opacity	NA
RHEOTECH™ 3800	NA	3	30	Water	••••	•••	•••	••••	••••	•••	Cost in use • Syneresis resistance Tinting resistance • Rub out	NA
RHEOTECH™ 3900	NA	3	30	Water	••••	•••	••	••••	••••	••	Compatibility • Syneresis resistance Brushability • Reduced post-thickening	NA
RHEOTECH™ 4000 MB	80*	3	30	Water	••••	••••	•••	••••	•••••	••	Bio-based through mass balance Syneresis resistance • In-can body	
RHEOTECH™ 4000 LC	NA	3	30	Water	••••	••••	••	••••	•••••	••	Lower carbon footprint Syneresis resistance • In-can body	
RHEOTECH™ 4200	NA	3	30	Water	••••	••••	••	••••	•••••	••	Good efficiency • Syneresis resistance Brushability • In-can body	NA
RHEOTECH™ 4800	NA	3	30	Water	••••	••••	••	•••••	••••	••	Cost in use • Syneresis resistance Rub out • In-can body	NA
RHEOTECH™ M 02	NA	4	30	Water	•••••	•••	•	•••••	••••		Cost in use • Sag & drip resistance High texture • Workability	NA
RHEOTECH™ M 03	NA	3	30	Water	••••	•••	•	•••••	••••		Sag & drip resistance • High texture Workability • Less water absorption	NA





From **Possible ●** to **Highly recommended ●●●●** 

All Rheotech™ are APEO-free\*\*, solvent-free\*\* and heavy metal-free\*\*.

Rheotech™ M thickeners are designed for highly filled and viscous systems such as putties, adhesives & sealants and textured paints. Most of the products in this brochure are now avaible with a lower carbon footprint version thanks to a bio-based sourcing using the Mass Balance approach. Don't hesitate to contact us to know more.

<sup>\*</sup>Ratio of bio-attributed biomass / Total product NF EN 16785
\*\*Not intentionally added but not specifically measured (not part of product specification)





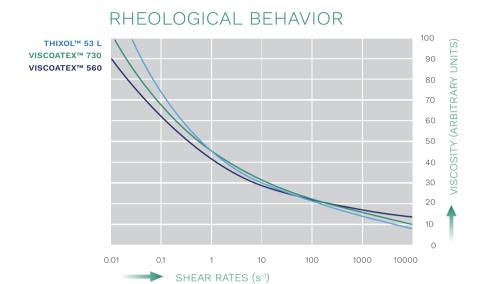


## THIXOL™ VISCOATEX™

RHEOLOGY MODIFIERS

A full range of ASE (Alkali Swellable Emulsions) type acrylic rheology modifiers with key advantages during the formulation and the application such as ease of use, strong thickening, high efficiency, high body and structure and good antisettling.

These products are very versatile to increase low shear viscosities in a wide range of end applications. Besides they can be an excellent alternative to HEC thickeners.



**THIXOL™** - Specific and unique acrylic thickeners providing key features and formulation benefits:

- Thixotropy
- Sprayability
- Water dilution resistance
- Sag resistance
- Anti-settling
- Color acceptance

VISCOATEX™ - A full range of ASE type acrylic rheology modifiers with key advantages such as:

- Ease of use
- Versatility
- Low dosage
- High efficiency
- High body and structure
- Good anti-settling

Viscoatex™ product range offers an excellent alternative to HEC thickeners.

#### **KEY BENEFITS**

#### Homogeneity upon thinning

STANDARD ASE & HEUR THIXOL™ 53 L

## Suspension stability VISCOATEXTM 560

**KEY BENEFITS** 



#### Sag resistance

WITHOUT

VISCOATEX™



### **▶** ASE: Acrylic thickeners

		Technical d	ata		hickenir nechanis			/iscosity ntributi				
Products	рН	Solids & Active content (%)	Solvent	Non asso- ciative	Self asso- ciation	Asso- ciative	Low Shear	Mid Shear	High Shear	Main key benefits		
THIXOL™ 53 L	3	30	Water	••••	•••••	•	••••	•••	•	Thixotropy • Antisettling Sprayability • Color acceptance		
THIXOL™ 50 S	3	30	Water	••••	•••••	•	••••	•••	•	Thixotropy • Sprayability Industrial coatings Robustness vs binders		
VISCOATEX™ 730	3	30	Water	••••	••••	•	••••	•••	•	High efficiency • Antisettling In-can body • Elasticity		
VISCOATEX™ 630	3	30	Water	••••	••	••	••••	•••	••	Versatility • Antisettling • Good body Color acceptance		
VISCOATEX™ 560	3	28	Water	•••••	••	••	••••	•••	••	Versatility • Antisettling • Good body Color acceptance		
VISCOATEX™ 46	4	32	Water	••••	••	••	•••	••	••	Cost in use • Easy handling Antisettling • Brushability		
VISCOATEX™ 330	3	30	Water	••••	••			Cost in use • Easy handling Antisettling • Viscosity stability				
VISCOATEX™ 100 S	3	> 96	Water	••••	••••	•	••••	•••	•	Powder thickener • High efficiency Antisettling • Slump resistance		

From **Possible ●** to **Highly recommended ●●●●●** 

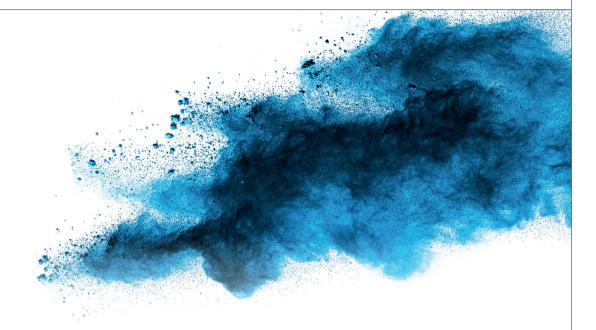


## **DISPERSING AGENTS**

Paints, coatings, inks, adhesives and sealants are formulated systems with a wide diversity of **pigments** and fillers which can vary significantly in and content depending on the end-use requirements.

Such ingredients will interact within the system and require to be well dispersed and stabilized in order to provide the maximum effect with a minimum impact of the formulation, while keeping a good processability.

Wetting and dispersing agents are playing a key role and the is crucial for a given system.

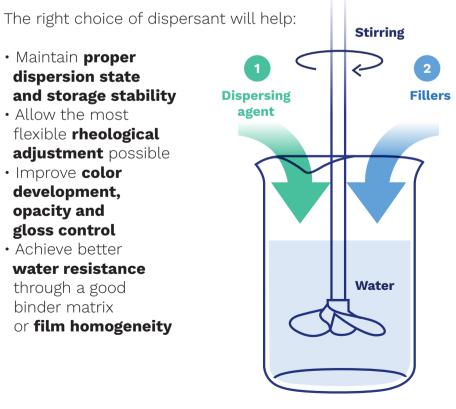


## DISPERSING AGENTS **TECHNOLOGIES**

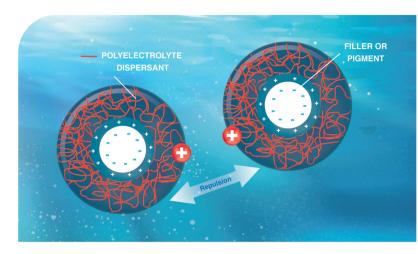
Optimize your pigmented formulation by selecting the recommended dispersing agents.

 Maintain proper dispersion state and storage stability

- Allow the most flexible rheological adjustment possible
- Improve color development, opacity and gloss control
- Achieve better water resistance through a good binder matrix or film homogeneity

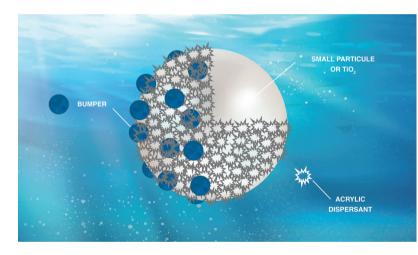


#### **ELECTROSTATIC REPULSION**



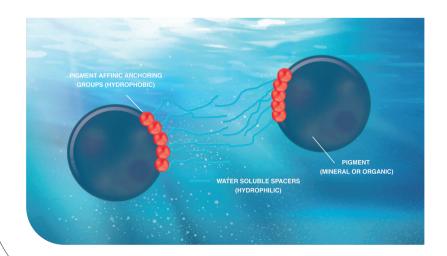
- Long distance for minerals
- In-can stabilization
- Productivity/cost effective
- ► Acrylic based ionic dispersants for electrostatic stabilization

#### **BUMPER EFFECT**



- Short distance
- Prevention of small particles or TiO<sub>a</sub> late flocculation
- Problem solving
- ▶ Pigment is coated with the most adapted acrylic dispersant
- ▶ Addition of a Bumper that will create a layer of spacing spheres around the polyacrylate layer

#### STERIC HINDRANCE WITH AFFINIC GROUPS



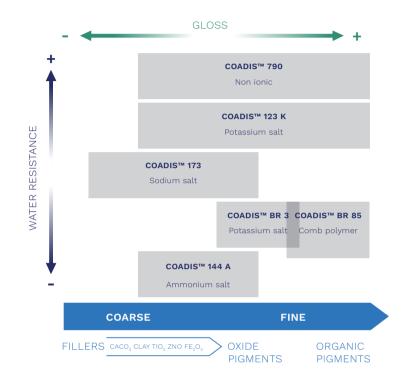
- Short & long distance
- For organic & inorganic
- For all types of waterborne coatings
- **▶** Steric stabilization



## DISPERSING AGENTS

Silk gloss paints but also high solids formulations such as thick coatings, sealants and putties require specific solutions. The Coadis™ dispersants range exhibits original solutions that combine:

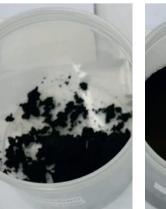
- Superior optical properties
- Gloss and gloss retention
- Color strength
- Hiding power with great applications properties
- Good flow and leveling



#### **KEY BENEFITS**

#### Carbon black dispersion

WITHOUT COADIS™ 790







WITH STANDARD





WITH COADIS™

		Tech	nical data			Suitable fo	r			
Products	pH Solids & Active content (%)		Neutralization	Solvent	Fillers	Organic pigments	Inorganic pigments	Main key benefits		
COADIS™ 790	6.5	6.5 40 Nonio		nionic Water		••••	••••	Compatibility • Storage stability Anticorrosion • Versatility		
COADIS™ 123 K	10	24	Potassium	Water	•••	••••	••••	Hydrophobic • Water marks resistance • Anticorrosion		
COADIS™ 234 K	10	24	Potassium	Water	•••	••••	••••	Hydrophobic • Water marks resistance • Anticorrosion		
COADIS™ 144 A	7	44	Ammonium	Water	••••	••	••••	Compatibility • Hiding power/Opacity Gloss development		
COADIS™ BR 3	8	40	Potassium	Water	•••	•••	••••	Compatibility • High gloss • Viscosity stability • Rub out		
COADIS™ BR 85	8	35	Low ionicity	Low ionicity Water		•••	••••	High gloss • Hiding power/Opacity Anticorrosion		
COADIS™ 615	4	40	Low ionicity	Water	•••	•••	••••	Compatibility • Storage stability Anticorrosion		
COADIS™ 173	10	30	Sodium	Water	••••	••	••••	Compatibility • ZnO dispersion Stain resistance		
COADIS™ A 122	8	35	Sodium	Water	••••	••	••••	ZnO dispersion • Floating resistance Anticorrosion		
COADIS™ OP 10	3	97	/	Water	•	••••	••	Easy handling • Post addition Floating resistance • Gloss		
COADIS™ 335 A	8	36	Ammonium	Water	•••	•••	•••	Compatibility • Viscosity stability Hiding power/Opacity		
COADIS™ 352 N	8	35	Sodium	Water	••••	•••	••••	Compatibility • Viscosity stability Hiding power/Opacity		

From Possible • to Highly recommended ••••







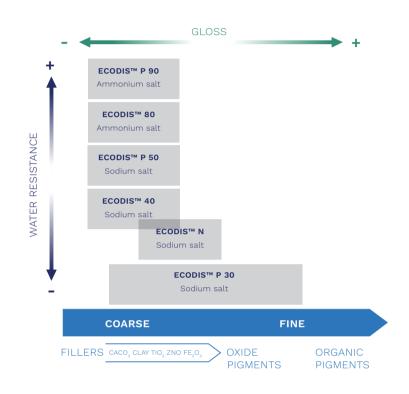
## ECODIS<sup>TM</sup> & ECODIS<sup>TM</sup> MB

## DISPERSING AGENTS

A full range of polyacrylic dispersing agents designed for flat, matt to semi-gloss paints that allows high loading in fillers and oxide pigments (TiO<sub>2</sub>, CaCO<sub>3</sub>, clay) as well as CaCO<sub>3</sub> extenders less than 1µm.

They also enable stable formulations with:

- Easier dispersion process
- Longer shelf life
- Optimized optical efficiency for eco-friendly formulations



#### **KEY BENEFITS**

#### Opacity, brush marks and hiding

WITHOUT ECODIS™







## Dispersion of calcium carbonate into water



	Bio-		Technic	al data		5	Suitable fo	r		Sustai-	
Products	content (%)	Solids & pH Active content (%		Neutrali- zation	Solvent	Fillers	Organic pigments	Inorganic pigments	Main key benefits	nable attribute	
ECODIS™ P 30	NA	8	42	Sodium	Water	••••	••	••••	High efficiency • Versatility Low foaming • Opacity	NA	
ECODIS™ P 30 MB	100*	8	42	Sodium	Water	••••	••	•••••	Bio-based through mass balance • High efficiency • Versatility • Low foaming • Opacity		
ECODIS™ P 30-30	NA	8	30	Sodium	Water	••••	••	•••••	High efficiency • Versatility Low foaming • Opacity	NA	
ECODIS™ P 50	NA	7.5	40	Sodium	Water	•••••	••	••••	High efficiency • High PVC Low foaming • Opacity	NA	
ECODIS™ P 50 MB	100*	7.5	40	Sodium	Water	•••••	••	••••	Bio-based through mass balance • High efficiency • High PVC • Low foaming • Opacity	<b>B</b>	
ECODIS™ P 500 HR	NA	4.5	40	Sodium	Water	•••••	••	••••	High PVC • Storage stability • Hard water	NA	
ECODIS™ P 90	NA	7	40	Ammonium	Water	•••••	••	••••	High efficiency • High PVC • Storage stability • Opacity	NA	
ECODIS™ P 90 MB	100*	7	40	Ammonium	Water	•••••	••	••••	Bio-based through mass balance • High efficiency • High PVC • Storage stability • Opacity		
ECODIS™ P 90-30	NA	7	30	Ammonium	Water	•••••	••	••••	High efficiency • High PVC • Storage stability • Opacity	NA	
ECODIS™ PE 620	NA	8.5	50	Ammonium	Water	••••	••	••••	High efficiency • High PVC • Storage stability • Opacity	NA	
ECODIS™ 40	NA	7.5	40	Sodium	Water	•••••	••	••••	Cost in use • Easy handling • Antisettling Hiding power/Opacity	NA	
ECODIS™ 80	NA	7	40	Ammonium	Water	••••	••	••••	Cost in use • Easy handling • Antisettling Hiding power/Opacity	NA	
ECODIS™ N	NA	8	40	Sodium	Water	••••	••	•••	Cost in use • Easy handling • Antisettling Hiding power/Opacity	NA	
ECODIS™ 326	NA	8	35	Sodium	Water	•••	•••	•••	High efficiency • Syneresis resistance Hiding power/Opacity	NA	
ECODIS™ 345	NA	8	45	Sodium	Water	•••	•••	•••	Cost in use • Easy handling • Antisettling Hiding power/Opacity	NA	



Most of the products in this brochure are now avaible with a lower carbon footprint version thanks to a bio-based sourcing using the Mass Balance approach. Don't hesitate to contact us to know more.

\*Ratio of bio-attributed biomass / Total product NF EN 16785







			Archi	tectural co	atings				Industrial	coatings		Textile &	Traffic	Graphic	Adhesives & Sealants		
	Products	Interior paints	Exterior paints	Plasters & Renders	Water proofing membranes	Roof coatings	General industry	Industrial wood	Protective & Marine	Intumescent paints	Transpor- tation	leather coatings	paints	arts	PSA	Sealants	Other adhesives
COAPUR™	XS 22	•••	•••		••	••	•••	•••	•		•••	••	•••	•••	••	•	•
COATOR	3020 BB	•••	•••		•	••	••	••	•	•	••	•	•	•	•••		•
	3020 / 3025 2501	•••	•••		•	••	••	••	•		••	•	•	•	•••		•
	2020 W / 2025	•••	•••		•	••	••	•••	•		•••	•••	•••	•••	••		•
	XS 12	•••	•••		•	••	•••	•••	•		•••	•	•	•••	••		•
	817 BB	•••	•••	••	•••	•••	•••	•••	•••	••	•••	•••	•••	•••	•••	••	••
	817 W / 830 W BR 100 P	•••	•••	••	•••	•	•••	•••	•		•	•	•••	•••	•••	•	•
	520 W	•••	•••		••	••	•••	•••	•		•••	•••	•	•	••	•	•
	XS 83	•••	•••	•••	•••	•••	•••	•••	•••		•••	••	•••	•••	•	•••	•••
	6050	•	•	•••	•••	•••	••	••	•		•	•	•	•	•	•••	•••
	980 W XS 71	•••	•••	•••	•••	•••	•••	•••	•••	••	•••	••	••	••	•	•••	•••
PHEOTECH™	1800	•••	•••			•••	•••	•••			•••	•	•	•	•		•
RH€OT€CH™	2000	•••	•••			•••	•••	•••			•••	••	•	•••	••		•
	2800	•••	•••			•••	•••	••			••	•	••	•	•••	•	•
	3300	•••	•••	••	••	•••	••	••	••		•	•	••	•	•••	•	•
	3900	•••	•••	••	••	•••	•	••	••		•	••	••	••	••	••	••
	4000 MB	•••	•••	•••	•••	••	•••	••	•••	••	••	•	••	•••	••	•••	•••
	4000 LC	•••	•••	•••	•••	••	•••	••	•••	••	••	•	••	•••	•	•••	•••
	4200	•••	•••	•••	•••	•••	•••	••	•••	••	••	•	••	•••	••	•••	•••
	4800 M 02	•••	•••	•••	•••	••	••	••	•••	••	••	••	••	•••	•	•••	•••
	M 03			•••	•••					•••						•••	•••
THIXOL <sup>TM</sup>	53 L	•••	•••	•••	•••	••	••	••	••	••	••	••	••	••	••	•••	•••
	50 S	••	••	••	••	•••	•••	••	•••	•••	•••	•••	•••	•••	•••	••	••
VISCOATEX™	730	•••	••	•••	•••	•••	•••	••	•••	••	••	•••	•••	•••	•	•••	•••
	560 46	•••	••	•••	••	•	•••	•	•	•••	•••	•••	•••	•••	•	•	•
	330	•••	••	•••	••	••	••		••	••	•	••	••	•••	•	••	••
	100 S	••	•	•••	•••	••				•		••	••	••		••	••
COADIS™	790	••	••	•	•••	•••	•••	•••	•••	•••	•••	•••	•••	•••	•	•••	•••
	123 K 234 K	••	•••	•	•••	•••	•••	•••	•••	•••	•••	•••	••	•••	•	•••	•••
	144 A	•••	•••	•	•••	•••	••	••	••	••	••	••	••	••		••	•
	BR 3	•••	•••	•	••	•••	••	•••	••	••	••	•	••	••		••	••
	BR 85	••	••	•	••	••	••	••	••	••	••	•	••	••		••	••
	615	•	•	•	•	•	•••	•••	•••	•••	•••	•	••	•	•	••	•
	173 A 122	••	•••	•••	•••	•••	••	••	••	•	•	•	•	••		•••	••
	OP 10	•	•	•			•	•	•		•	•	•	••	•		
	335 A												•••				
	352 N												•••				
€CODIS™	P 30	•••	•••	•••	••	••	••	••	••	•	••	•••	••	••		•••	••
	P 30 MB P 50	•••	•••	•••	••	••	••	••	•	•	•	•••	••	••		•••	•••
	P 50 MB	•••	••	•••	•	•	•	•	•		•	••	•••	•		•••	•••
	P 500 HR	••	••	••	•	•	•	•	•		•	•	•	•		•	•
	P 90	••	•••	•	••	••	••	••	••		••	•	•••	•		•	•
	P 90 MB	••	•••	•	••	••	••	••	••		••	•	•••	•		•	•
	PE 620 40	•	••	••	•	•	•	•	•		•	•	••	••		•••	•
	80	•	••	•	•	••	••	••	••		••	•	•	•		•	•
	N	•••	••	•••	•	•	•	•	•		•	•	•	•		•••	•••
	326												•••				
	345												•••				

## MARKET SOLUTIONS











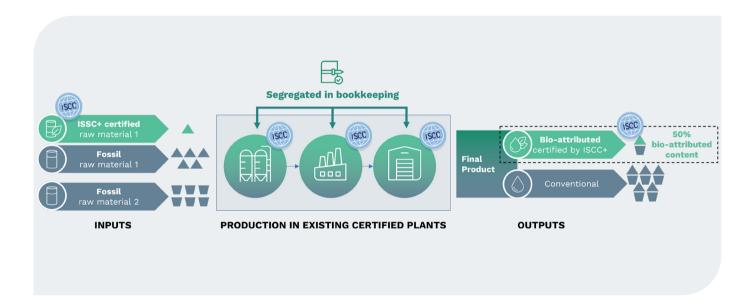
18



## FOCUS on MASS BALANCE approach

# A bio-based offer using mass balance approach to transition to a more circular and lower carbon economy

Arkema is now offering a brand-new bio-based acrylic materials offer using the "Mass Balance" approach. This new offer allows our customers to benefit from a product range coming from renewable feedstocks with a lower carbon footprint compared to the fossil version.



# What is the "Mass Balance" approach?

The "Mass Balance" approach consists in replacing fossil by renewable feedstocks as the origin of the supply chain, segregating by bookkeeping the quantity of renewable material and "attributing" this quantity to finished products at the end of the chain.

The "Mass Balance" approach requires no modification to the process, or new product accreditation as the high quality and performance of the products remain the same, which makes it easier for our customers to take them up.

# Certifying the traceability of this bio-based origin

To ensure the traceability of our "Mass balance" products, our whole supply chain is certified by a third party according the ISCC+ standards. We provide our customers with certificates that guarantee the share of bio-based feedstock in the product they are purchasing.

The ISCC-PLUS certification of the whole supply chain guarantees that the origin of the renewable sources meets ISCC+ standards for sustainable feedstocks

For more details from our website:



Ask questions to our experts



**Library – docs & webinars** 



Web services - TDS - sampling



Interactive product selectors & brochures





RheologySpecialtyAdditives.com

Please consult Arkema's disclaimer regarding the use of our products on: http://www.arkema.com/en/products/product-safety/disclaimer/

#### **COATEX Headquarter**

35 rue Ampère - BP 8 - ZI Lyon Nord - 69730 Genay - France Tel: +33 (0)4 72 08 20 00

RheologySpecialtyAdditives.com

#### **ARKEMA France**

420, rue d'Estienne d'Orves - 92705 Colombes Cedex - France Tel: +33 (0)1 49 00 80 80

 $\label{lem:disclaimer} Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on https://www.arkema.com/global/en/products/product-safety/disclaimer/$ 

Arkema France, a French société anonyme registered at the Trade and Companies Register of Nanterre under the number 319 632 790



