

We will start soon...

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Your **hosts** for this call

Highly efficient,
pronounced
Newtonian PU
rheology modifier



Stefan Lehner
Presenter



Andrea Schamp/
Kerstin Schurig
Chat



Stefan Lehner

**Technical Sales
Formulation Additives
EMEA region**



Rheovis[®] PU 1340

Highly efficient, pronounced Newtonian PU rheology modifier

Ludwigshafen, Sept 09th, 2020



Agenda

1. Introduction
2. Key Take Aways
3. Today's requirements for HEUR rheology modifiers
4. Rheovis[®] PU 1340 – Rheological and Formulation properties
5. Summary

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 <p>Dispersing Agents</p>	 <p>Defoamers</p>	 <p>Rheology Modifiers</p>	 <p>Wetting Agents & Surface</p>	 <p>Film-forming Agents</p>	 <p>Light Stabilizers & Anti-oxidants</p>
Dispex®/ Dispex® Ultra	Foamaster®/ FoamStar®	Rheovis®	Hydropalat®	Loxanol®	Tinuvin® Lignostab® Irganox®
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 <p>Architectural Coatings</p>	 <p>Industrial Coatings</p>	 <p>Automotive Coatings</p>	 <p>Furniture & Flooring</p>	 <p>Adhesives</p>	 <p>Construction</p>	 <p>Printing & Packaging</p>	 <p>Composites</p>
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Rheovis® PU 1340 - Key Take Aways



Rheovis® PU 1340:
State-of-the-art high-shear rheology modifier



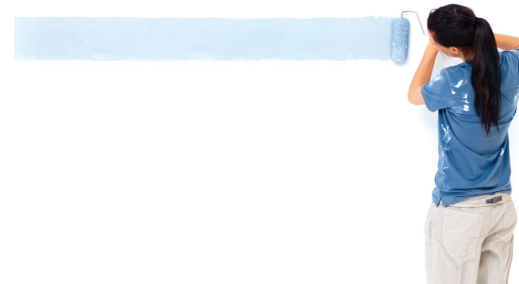
Rheovis® PU 1340:

- ✓ Excellent flow and levelling performance
- ✓ Improves coating build up



Rheovis® PU 1340

- ✓ Near Zero VOC
- ✓ MIT - free
- ✓ Blue Angel
- ✓ Nordic Swan



Rheovis® PU 1340:

- ✓ Excellent pigment paste compatibility
- ✓ Excellent hiding

Applications: All kind of water based paints and stains

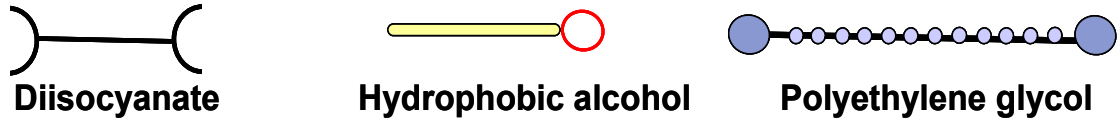
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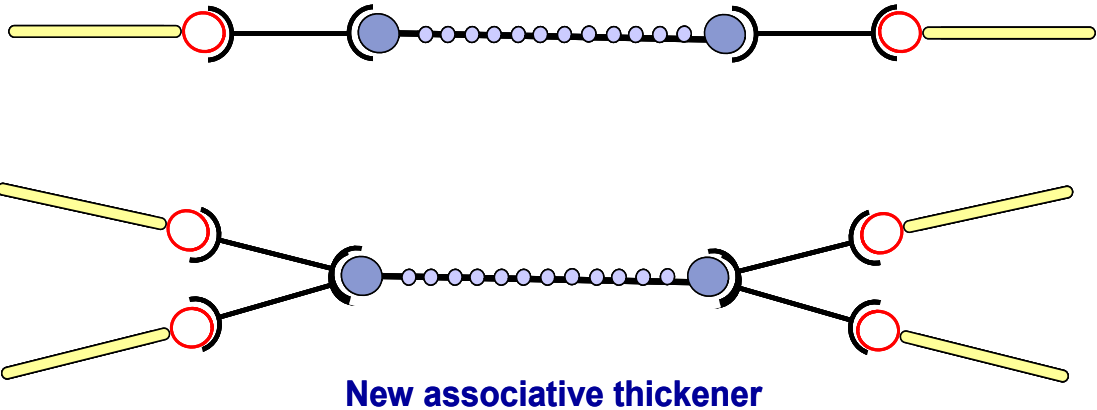
Nonionic rheology modifiers

Rheovis[®] PU - Polyurethane chemistry (HEUR)

Elements of Associative Thickeners



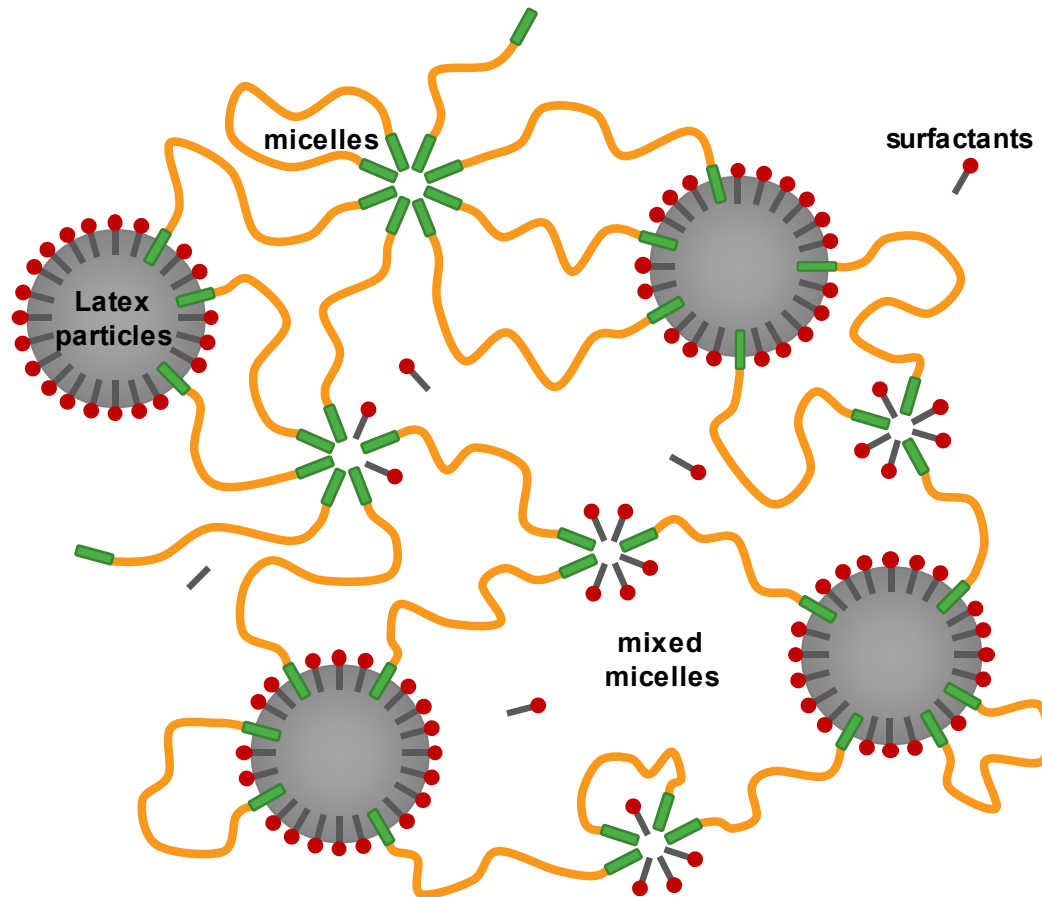
Classical Associative Thickener



HEUR: Hydrophobically modified ethoxylated urethane

Rheovis PU/PE – How do HEUR/HMPE rheology modifiers work?

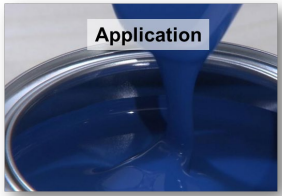
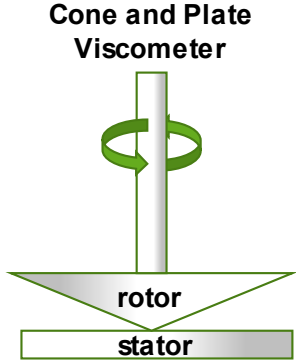
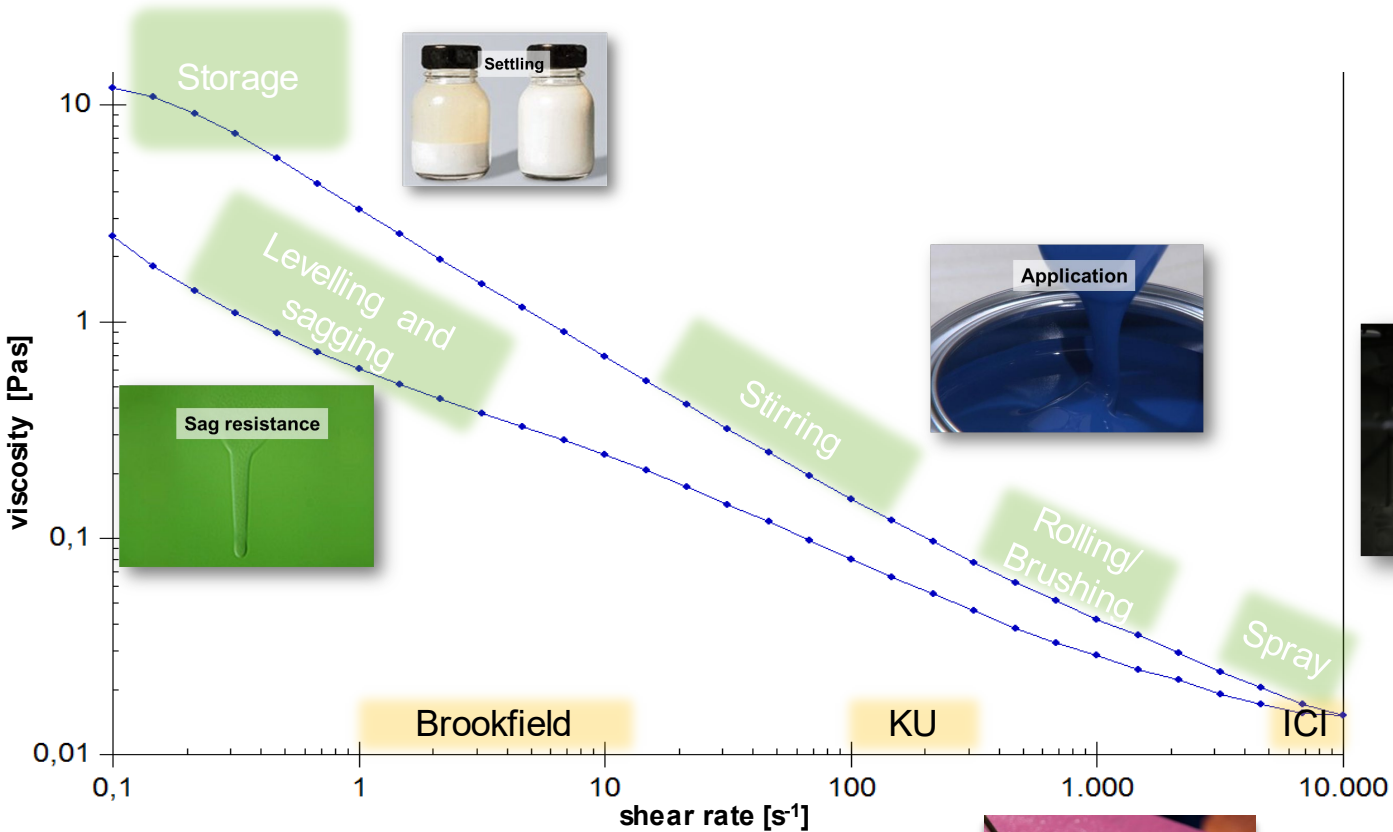
Network formation



Key factors

- Particle size
- Hydrophobicity/hydrophilicity
- Surfactants
- Coalescents

Importance of a rheology curve – From rheology curve to application properties



Portfolio Overview Rheology Modifiers

Newtonian	Pseudoplastic			
	HEUR	HASE	ASE	Shear rate
	PU 1190/ 1191	HS 1162	AS 1130	Low-shear (sag resistance, In-can viscosity)
	PU 1216	HS 1152	AS 1125	
	PU 1256	HS 1169		Mid-shear (Balance sag resistance & levelling)
	PU 1291	HS 1212		
	PU 1214			
	PU 1340			High-shear (Levelling, reduced spattering, layer thickness, brushability)
PE 1330	HS 1303 EB			

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Rheovis® PU 1340

Product features and Performance tests

Property	Method	Data
Appearance	Visual	Milky white to slight yellowish
Viscosity	Brookfield RVT 1/20 rpm @ 23°C	Ca. 2 500 mPa.s
pH		Ca. 7
Solid content	TNV (1g, 30min, 140°C)	Ca. 20%
VOC	ISO/FDIS 11890-2:2013	< 0.1% = Low

Paint Systems

Acronal® Hide 6296 – Styrene acrylic – Facade paint

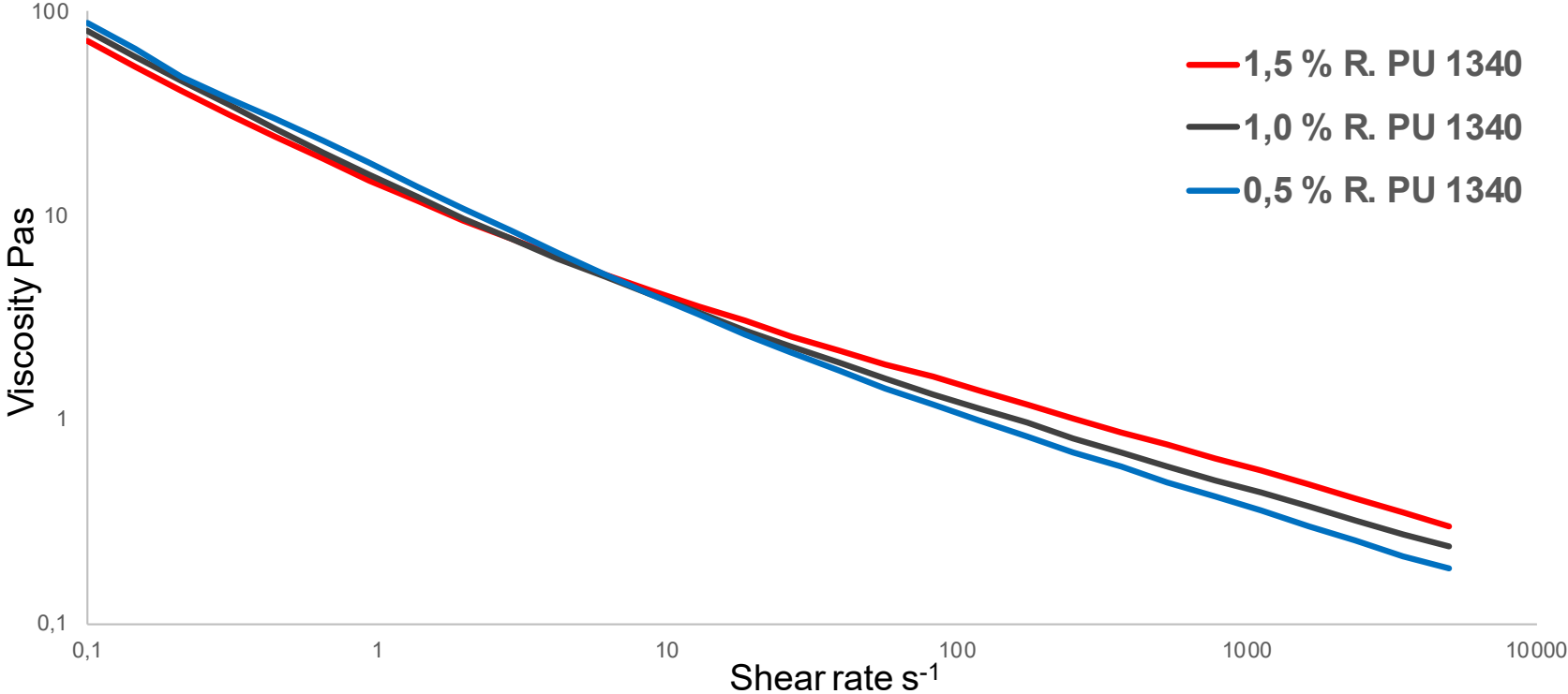
Acronal® LR 9014 – Pure acrylic – Gloss formulation

Property	Test Method
Rheology behavior	KU, ICI, flow curve
Tinting behavior	Flow curve, CIE – L*a*b, visual

Rheovis® PU 1340

Exterior paint PVC 52% based on Acronal Hide 6296

Correlation Rheology profile – demand

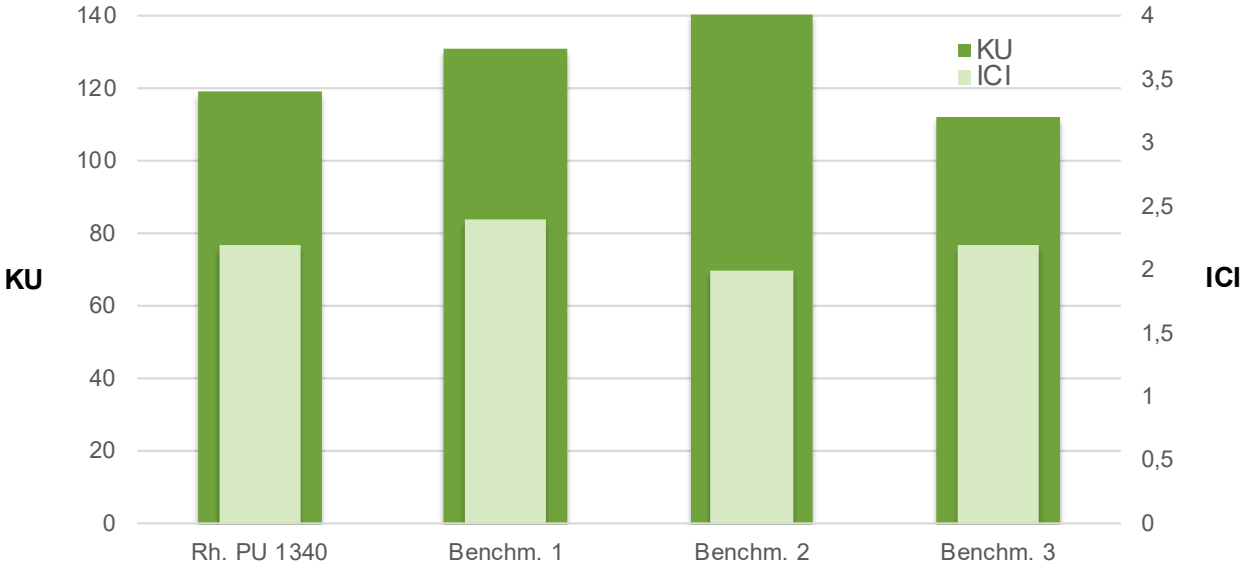


	0,5% R. PU 1340	1,0% R. PU 1340	1,5% R. PU 1340
KU	106	108	110
ICI	1,8	2,1	2,4

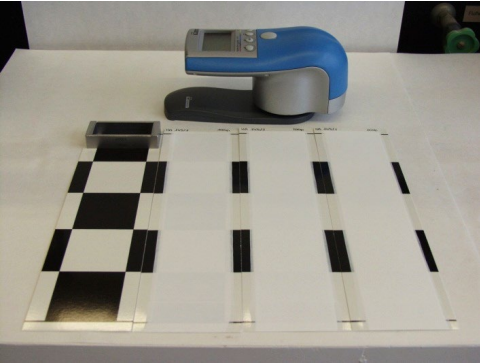
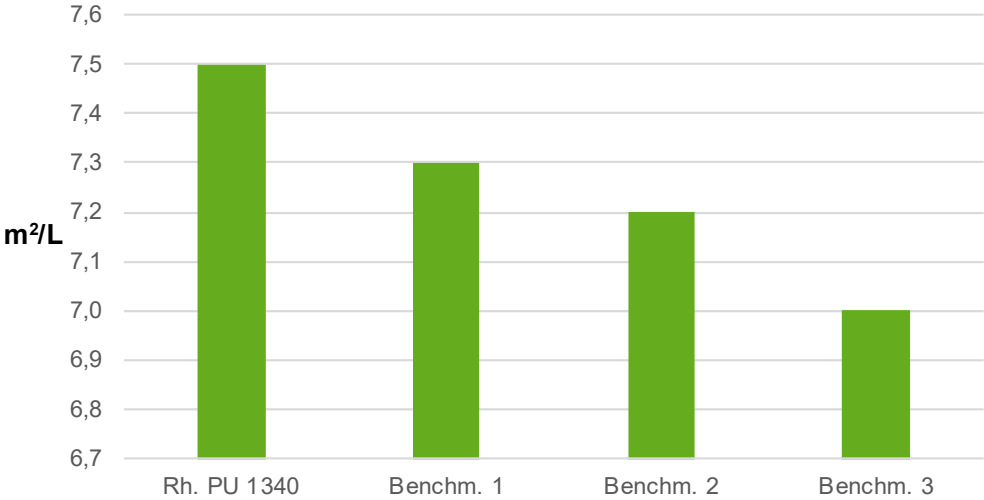
Rheovis® PU 1340

Exterior paint PVC 47% based on Acronal Hide 6296

Rheology - comparison

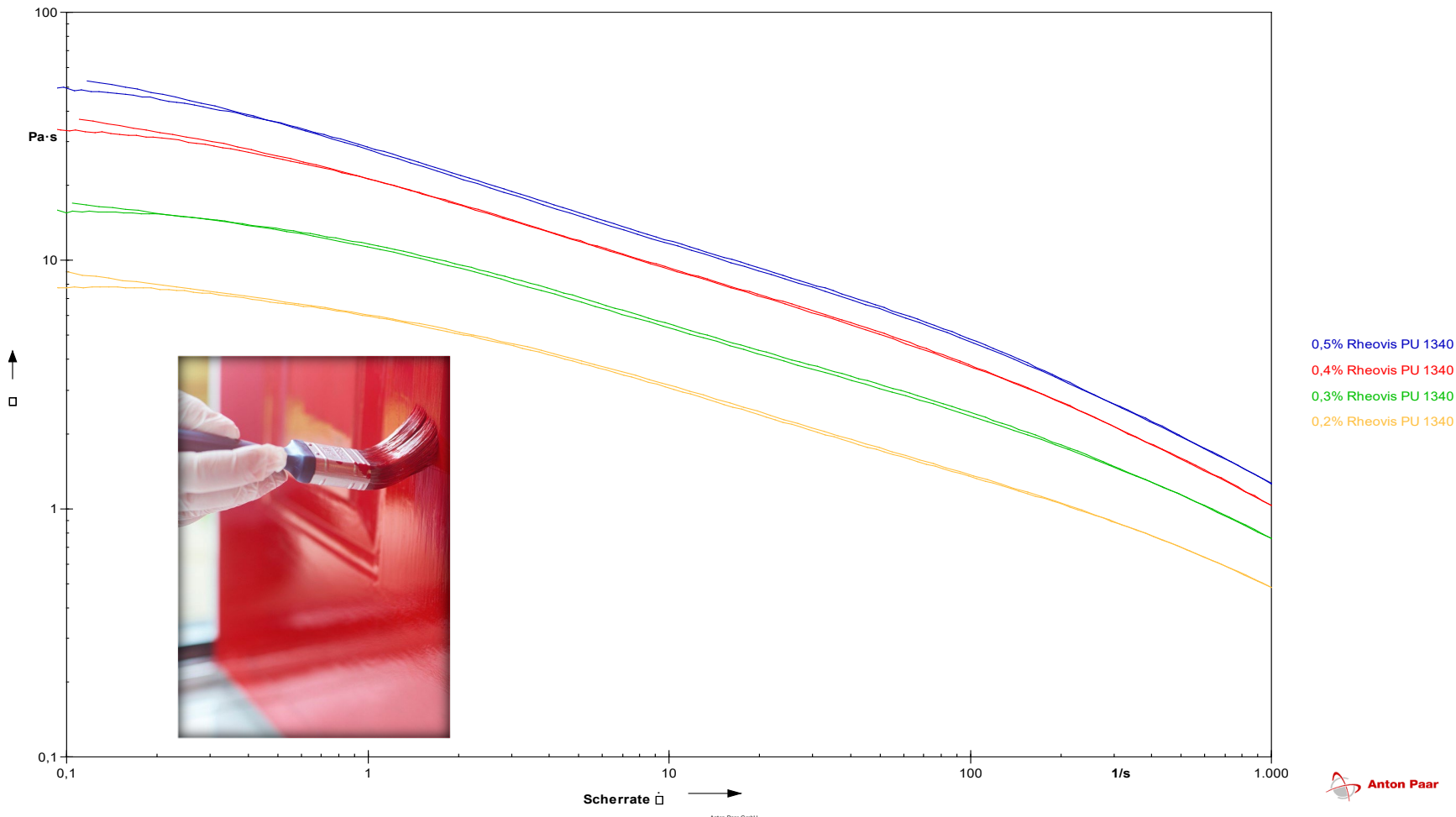


Spreading rate (m²/L)



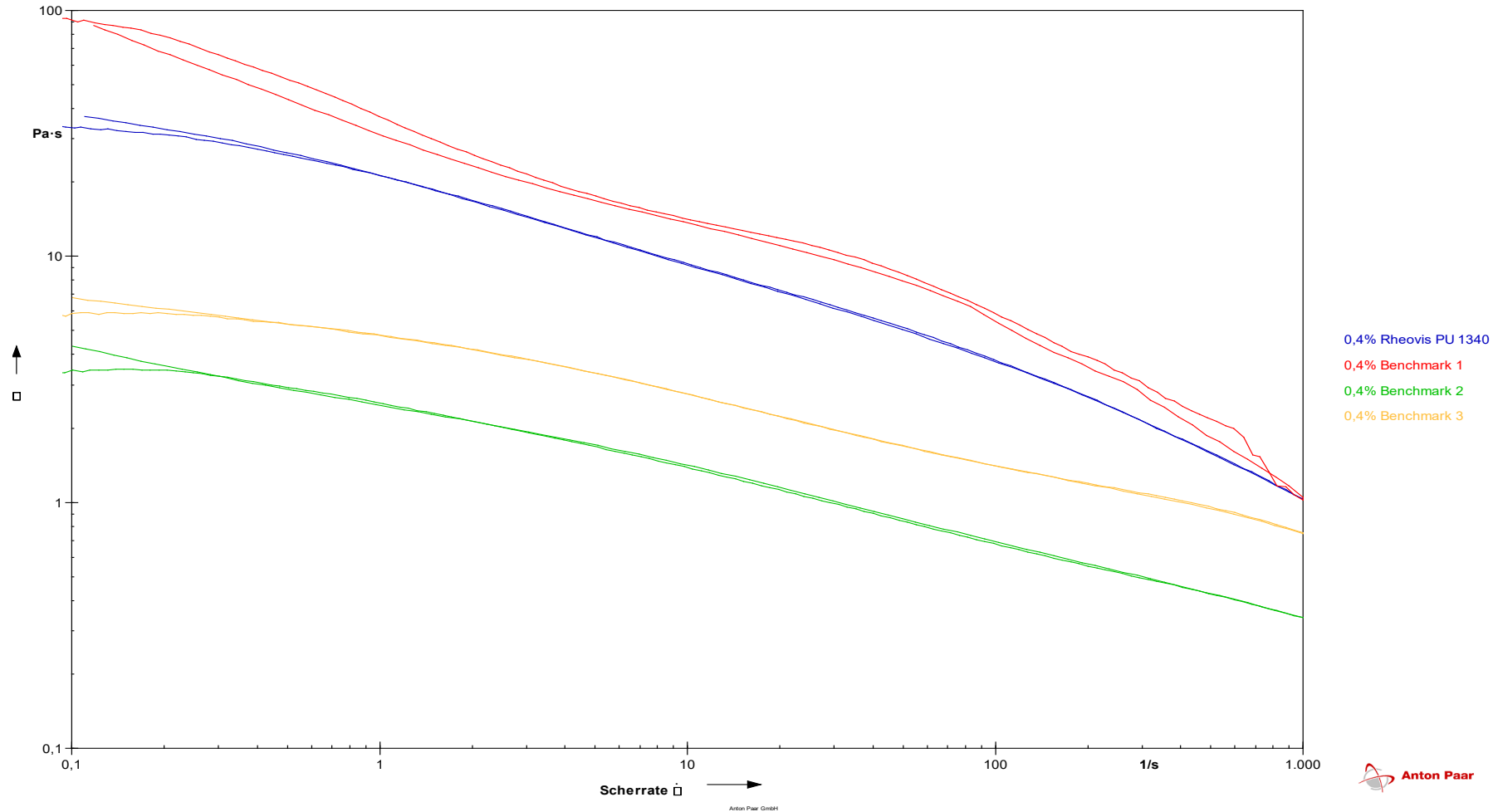
Rheovis® PU 1340

Gloss paint based on Acronal LR 9014



Rheovis® PU 1340

Gloss paint based on Acronal LR 9014



High efficiency combined with Newtonian flow behavior.

Rheovis® PU 1340

Gloss paint based on Acronal LR 9014 – Pigment paste compatibility

DE*

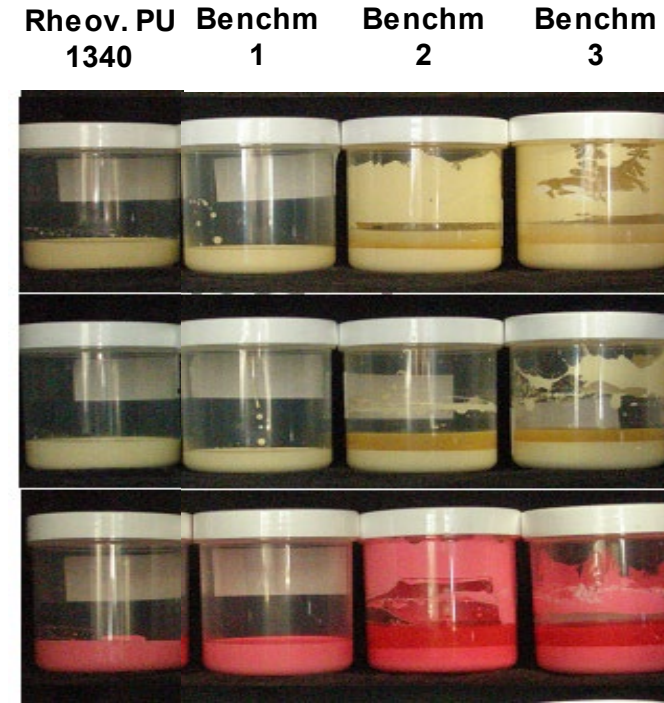
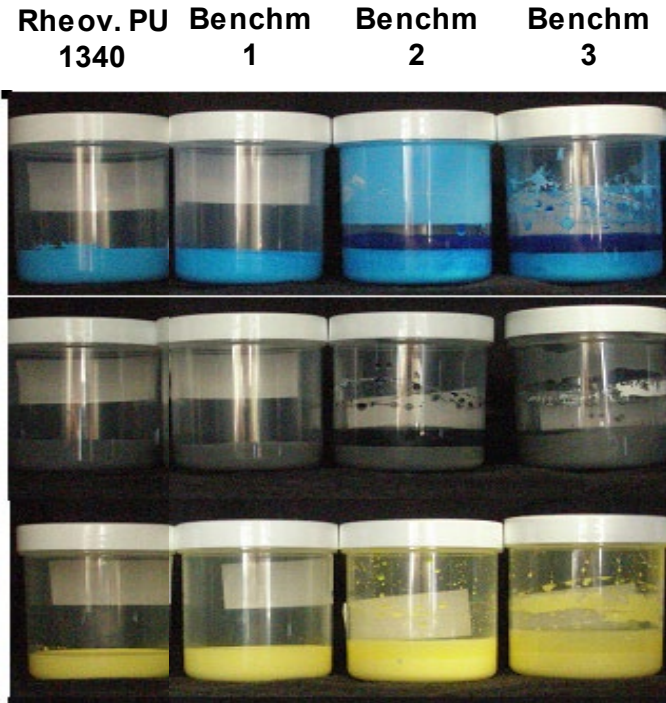
DE*

Rheovis PU 1340	0,8	0,8
Benchmark 1	0,5	0,6
Benchmark 2	4,7	4,0
Benchmark 3	9,9	4,4

Excellent pigment paste compatibility.

Rheovis® PU 1340

Gloss paint based on Acronal LR 9014 – Pigment paste compatibility



Excellent stability in combination with various pigment pastes.

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Rheovis® PU 1340

Summary

- Excellent rheology modifier with pronounced Newtonian flow behavior
- Improved film build and hiding properties with roller and brush applications
- Excellent levelling performance and spatter resistance
- Excellent compatibility with broad range of pigment pastes
- Near Zero VOC
- MIT-free
- Recommended for paints fulfill various ecolabels



In coatings where excellent hiding and broad pigment paste compatibility are required, Rheovis® PU 1340 is your best choice!

Lab Assistant for Architectural Coatings

Lab Assistant is a web-based application that makes it easier for you to find BASF dispersions and additives for Architectural Coatings in Europe (www.lab-assistant.basf.com)

Features & Benefits

- Get product recommendations and formulation ideas according to the final properties of the paint, technical data, complete recipes and ingredient calculator
- Access formulation expertise to gain new insights and ideas
- All relevant data (e.g. MSDS, TDS, Reach, sustainability aspects, brochures, value cards, etc) available in one location
- Compare products or formulations
- Individualize your own account and share content with your colleagues
- Order samples or get in touch with our experts
- Runs on your PC / laptop / tablet / smartphone

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There is more to come...

Next series of Webinars starting September 1st

Dispersing Agent Toolbox: **Sept 1 & 3**

UV- and thermostabilization of polyurethane and SMP-systems: **Sep 9 & 10**

Highly efficient Newtonian PU-thickener for architectural paints: **Sep 16 & 17**

Exceptional protection of joinery coatings: Sep 23 & 24

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