



Rheovis[®] HS 1303 EB

Highly efficient, APEO- and formaldehyde-free Newtonian HASE thickener

Ludwigshafen, April 17th, 2020





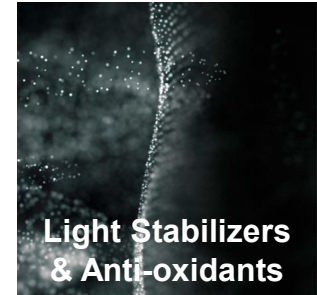
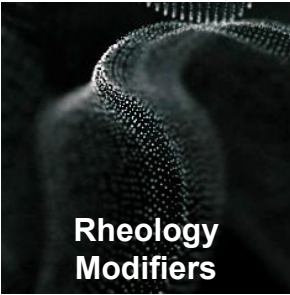
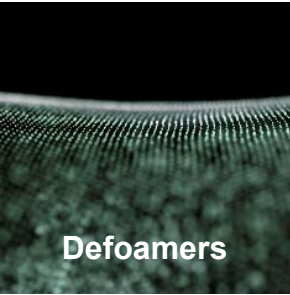
Stefan Lehner

**Technical Sales
Formulation Additives
EMEA**

Agenda

1. Introduction
2. Performance Highlights
3. Summary

Our comprehensive portfolio enables solutions for various industries



BASF is the premiere provider of **Performance & Formulation Additives** for the paints and coatings industry



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Dispex [®] / Dispex [®] Ultra	DISPERSING AGENTS	Efka [®]
Foamaster [®] / FoamStar [®]	DEFOAMERS	Efka [®]
Rheovis [®] (organic) / Attagel [®] (clays)	RHEOLOGY MODIFIERS	Efka [®]
Hydropalat [®]	WETTING AGENTS	Efka [®]
Loxanol [®]	FILM-FORMING AGENTS	Efka [®]
Tinuvin [®] / Lignostab [®]	LIGHT STABILIZIERS	Tinuvin [®] / Chimassorb [®]
Irganox [®]	ANTIOXIDANTS	Irganox [®] / Irgafos [®] / Irgastab [®]

*Efka[®] includes also High Solids and 100% Solid Systems

Rheovis® HS 1303 EB - Key Take Aways



Rheovis® HS 1303 EB:
Most newtonian HASE
thickener available in
the market



Rheovis® HS 1303 EB:
Excellent anti-settling
properties/ reduction
of syneresis



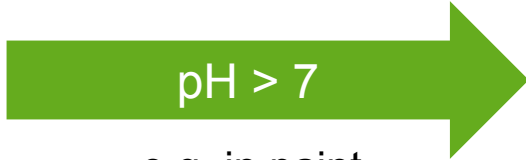
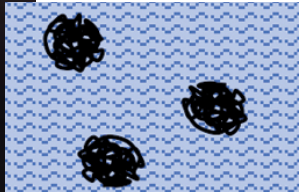
Rheovis® HS 1303 EB:
No formaldehyde
Near zero VOC



Rheovis® HS 1303 EB:
Closes portfolio gap
Rheology modifier

Applications: All paints, especially DIY-Wood Paints

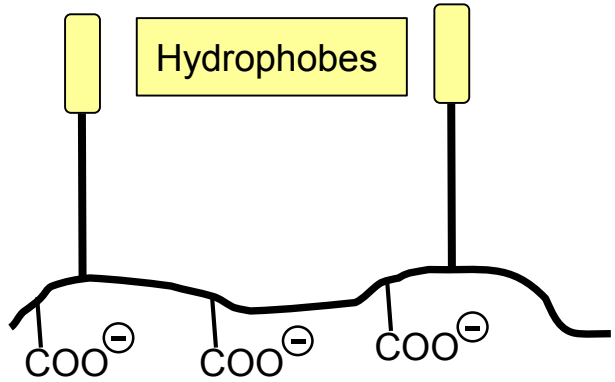
How do HASE rheology modifiers work?



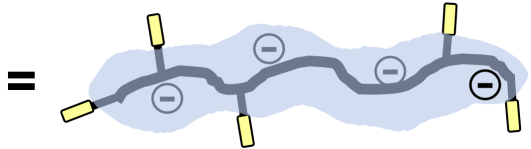
e.g. in paint formulation



Additive product form:
emulsion @ pH < 5



expanded microgel particles a/o
dissolved uncoiled polymers



Portfolio Overview Rheology Modifier

Newtonian	Pseudoplastic			Shear rate
	HEUR	HASE	ASE	
	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	HS 1332		High-shear (levelling, reduced spattering, layer thickness, brushability)
PE 1330	HS 1303 EB			

Rheovis® HS 1303 EB

Highly efficient HASE rheology modifier for interior/exterior architectural water based paints



Application:

Rheovis® HS 1303 EB – HASE thickener specially designed for providing high shear viscosity (ICI) and avoiding of syneresis, in a single addition.

Sustainability highlights:

- APEO free
- Low VOC
- Highly efficient at low dosage

Performance highlights:

- High shear rheology modifier with significant ICI contribution
- Improved film build and hiding properties with roller and brush applications
- Excellent spatter and levelling performance
- Avoiding of syneresis
- Highly compatible with different emulsion and colorants

Characteristic Values:

Appearance	White liquid
Solids (%)	~ 25 %
Viscosity	Max. 50 mPa·s

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Product features and Performance tests

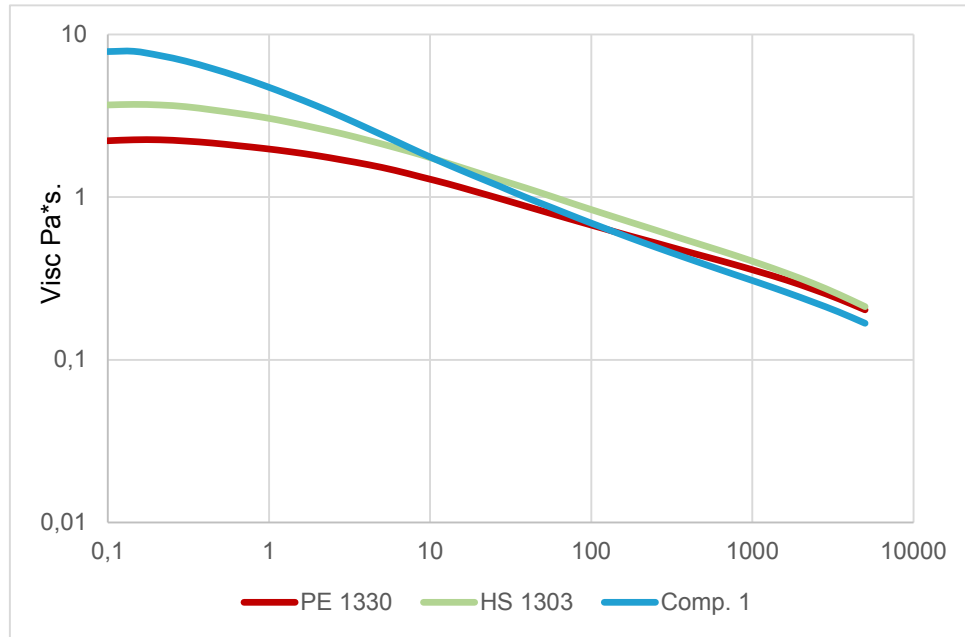
Property	Method	Data
Appearance	Visual	Opaque white liquid
Viscosity	Brookfield RVT 1/20 rpm @ 23°C	Max. 50 mPa.s
pH		2,0 – 4,0
Solid content	TNV (1g, 30min, 140°C)	24 - 26%
VOC	ISO/FDIS 11890-2:2013	< 0.01% = Low

Paint Systems

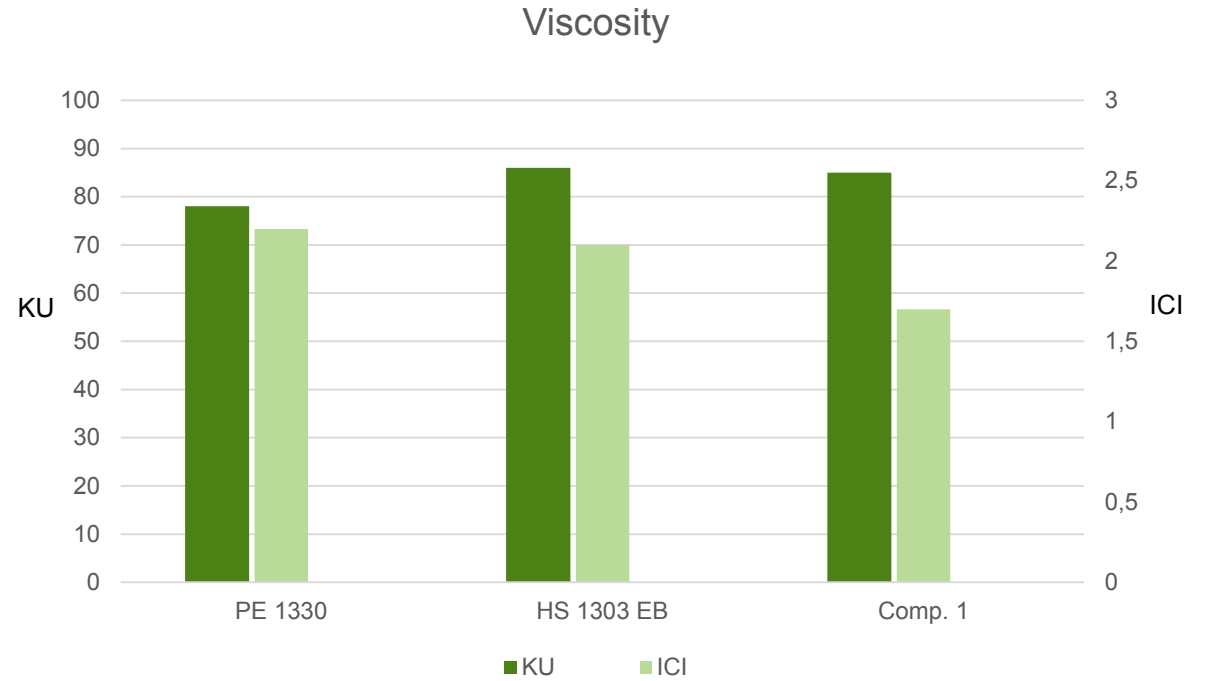
Acronal® LR 9014 – Pure acrylic – Semi Gloss formulation

Property	Test Method
Rheology behavior	KU, ICI, flow curve
Appearance	Levelling, sag resistance, anti-settling properties
Paint properties	Pendulum hardness, blocking resistance, gloss

Test formulation, wood paint based on Acronal® LR 9014 – Pure acrylic



- 10 Parts R. PE 1330 / 4 Parts Comp. 1 KU
- 10 Parts R. PE 1330/ 4 Parts HS 1303 EB
- 14 Parts R. PE 1330

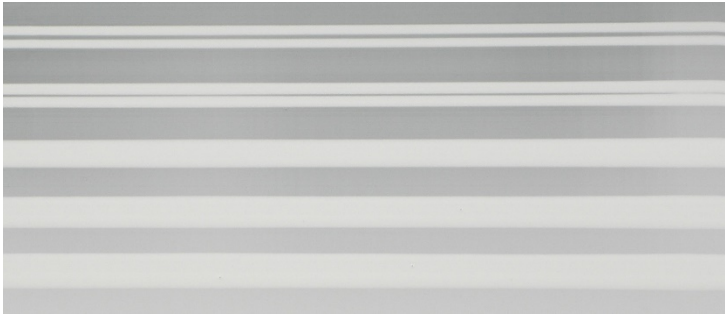


Rheovis® HS 1303 EB offers excellent ICI contribution.

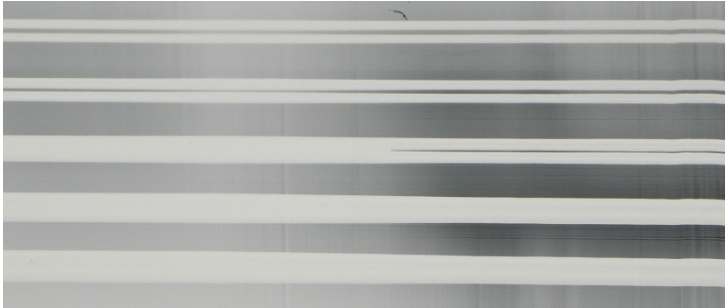
Excellent Levelling



14 Parts Rheovis PE 1330



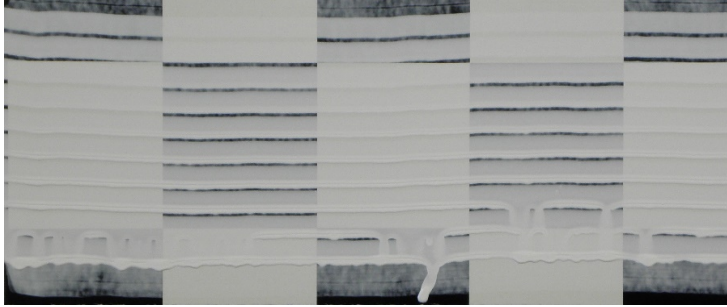
10 Parts Rheovis PE 1330
4 Parts Rheovis HS 1303 EB



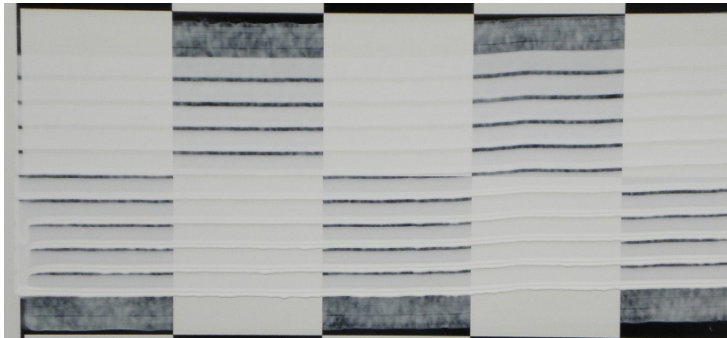
10 Parts Rheovis PE 1330
4 Parts Comp. 1

Rheovis® HS 1303 EB shows excellent levelling performance.

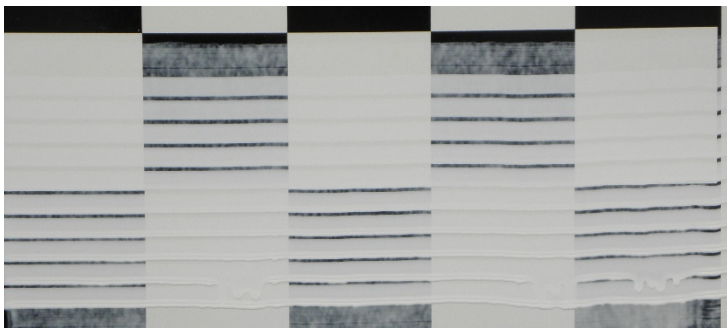
Excellent sag resistance



← 14 Parts Rheovis PE 1330



← 10 Parts Rheovis PE 1330
4 Parts Rheovis HS 1303 EB



← 10 Parts Rheovis PE 1330
4 Parts Comp. 1

Rheovis® HS 1303 EB shows improved sag resistance.

No Syneresis



14 Parts Rheovis PE 1330



10 Parts Rheovis PE 1330
4 Parts Rheovis HS 1303 EB



10 Parts Rheovis PE 1330
4 Parts Comp. 1

With Rheovis® HS 1303 EB
syneresis can be avoided.

Summary of comparison – Trim paint based on Acronal® LR 9014

	PE 1330	HS 1303 EB	Comp. 1
Levelling	6	6	5
Sag resistance	7	10	8
Syneresis	4	5	3
Pendulum hardness 24h	18	18	18
Gloss 60°	52	52	51
Blocking resistance (RT)	5	5	5

Rheovis® HS 1303 EB keep excellent paint performance.

0 => worse

5 => perfect

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Rheovis® HS 1303 EB

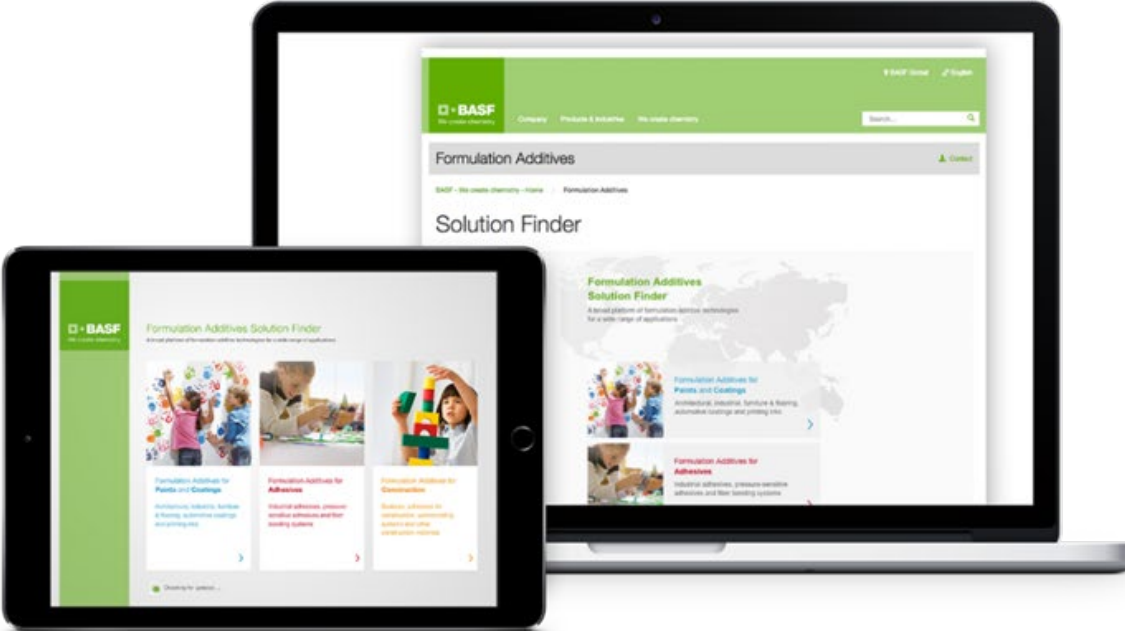
Summary

- Balanced rheology modifier with excellent ICI contribution
- Improved film build and hiding properties with roller and brush applications
- Excellent spatter resistance
- Excellent levelling and sag resistance
- Improved anti-settling
- Near Zero VOC



In coatings where both, excellent brushability combined without syneresis tendency are required, Rheovis® HS 1303 EB is your best choice!

Rheovis® HS 1303 EB Online Tools



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We create chemistry

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