

Formulation Additives

Technical Data Sheet

Rheovis[®] PE 1332 (old: DSX[®] 3220)



Product Description

Rheovis[®] PE 1332 is a solvent-free, VOC-free; low odor associative thickener specifically designed to give a Newtonian rheology profile and excellent balance of performance properties to premium flat, eggshell, semi-gloss and gloss coatings. Rheovis[®] PE 1332 is excellent for high shear viscosity build for one-coat coverage while enhancing low shear performance for superior sag resistance. Rheovis[®] PE 1332 imparts excellent flow and leveling due to its comb-polymer structure and belongs to a family of polyether thickeners shown to have excellent exterior durability.

Chemical Composition

Polyether solution in water

Properties

Product Specifications

Appearance (8000)	Clear to hazy liquid
Solids (8766)	19 – 21 %
Brookfield viscosity (LVT, sp-3, 12 rpm, 25 °C)	900 – 1300 mPa.s
Specific gravity, g/ml (ISO 2811-3, 25°C)	1.0 – 1.1

These typical values should not be interpreted as specifications.

Applications

Rheovis[®] PE 1332 offers the following advantages:

- Highly efficient in ICI viscosity development
- Superior sag resistance
- Excellent flow and leveling
- Excellent scrub resistance
- Excellent shelf life for consistent efficiency in performance (non-settling solution)
- Zero-VOC

In paint formulations, typical use levels can vary from 10 grams to 40 grams per liter (10 lbs to 40 lbs per 100 gallons) of paint, depending on the system being thickened. Combinations of Rheovis[®] PE 1332 with other low/mid shear Rheovis[®] PE 1332 modifiers can be used to attain the desired balance of high/low shear viscosities.

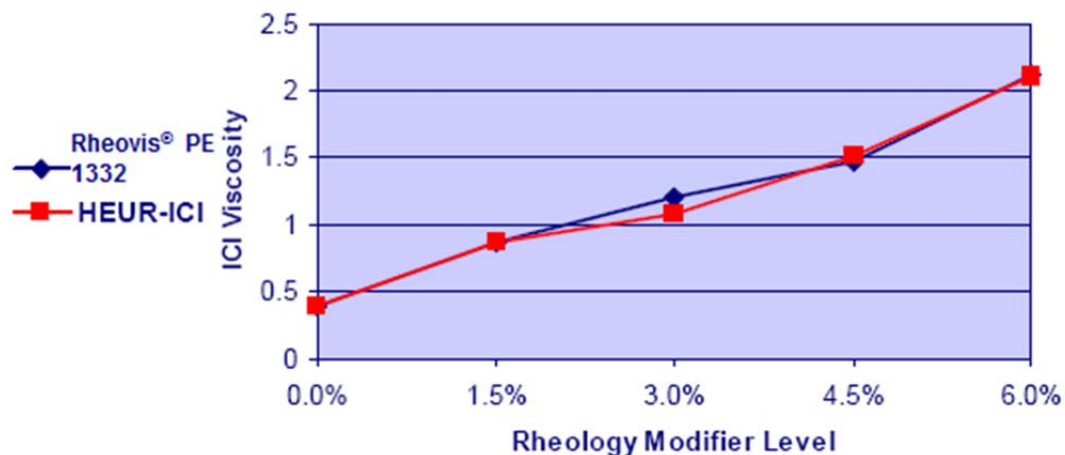
Rheovis[®] PE 1332 is usually added as the final ingredient in a formulation. However, in cases where there is limited agitation at this stage, addition of 10 - 20 % of the total quantity of Rheovis[®] PE 1332, just after the grind stage, can aid incorporation of the thickener.

Formulation

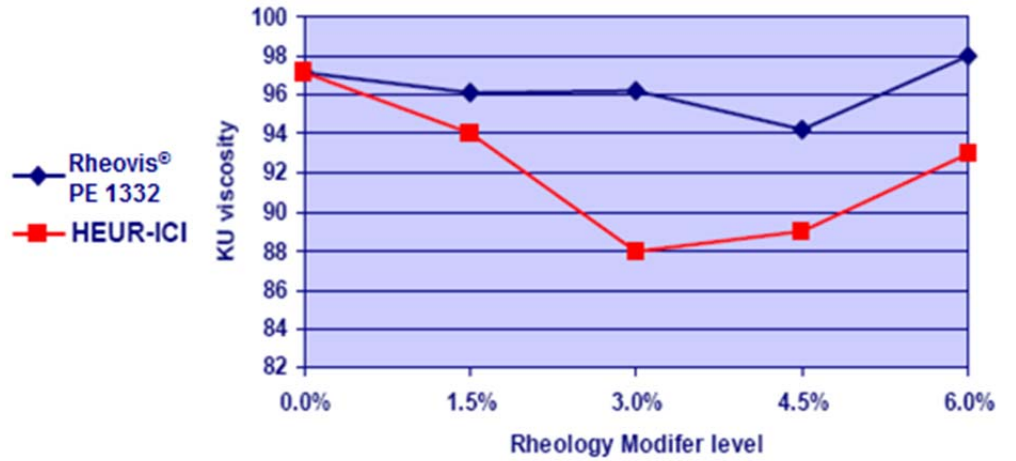
Semi Gloss Topcoat (50 g/l VOC)			
Ingredient	Weight (pounds)	Volume (gallons)	Supplier
Water	115.0	13.8	
Ethylene Glycol	13.8	1.5	
Natrosol 250 HBR	1.0	0.1	Aqualon
Proxel GXL	1.0	0.1	Arch
Dispex [®] CX 4230	10.5	1.1	
Triton CF10	2.2	0.3	Dow
Foamstar [®] ST 2438	1.5	0.2	
TiPure R-706	205.0	6.2	DuPont
OmyaCarb 3	45.0	2.0	Omya
High Speed Disperse 15 minutes, 6 Hegman Grind then add the following:			
Water	80.0	9.6	
Loxanol [®] CA 5320	13.8	1.8	
Rhoplex S G30	415.0	48.4	Dow
Water	60.0	7.2	
Ropaque Ultra	55.0	5.5	Dow
Triton X-100	4.0	0.5	Dow
Foamstar [®] ST 2438	1.0	0.1	
Aqua Ammonia	1.5	0.2	
Rheovis [®] PE 1215	7.4	0.9	
Rheovis [®] PE 1332	30.0	3.4	
Totals	1062.7	102.9	
NVW	49.0%		
NVV	37.0%		
VOC	45 g/l		
NVV	27.6%		Includes Opaque Polymer

Test Results

Rheovis[®] PE 1332 is a very efficient ICI builder. The following comparative study demonstrates similar ICI viscosity profile against a HEUR ICI builder.

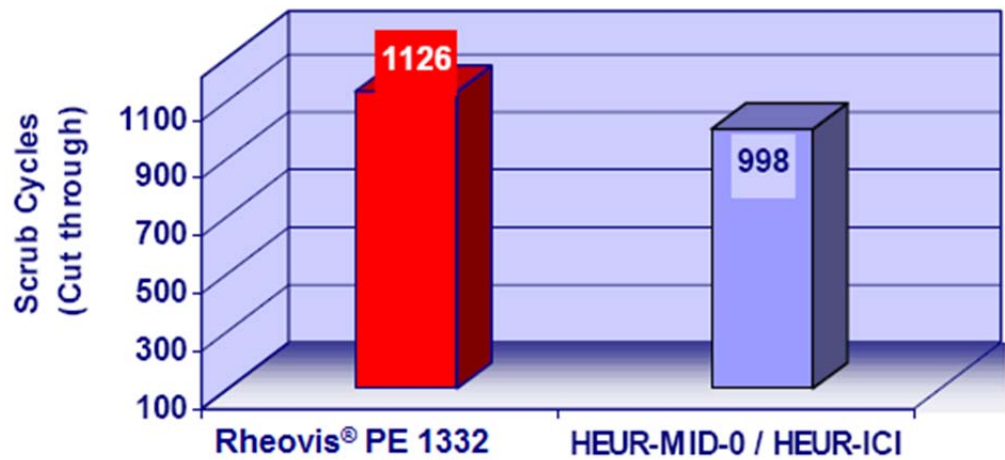
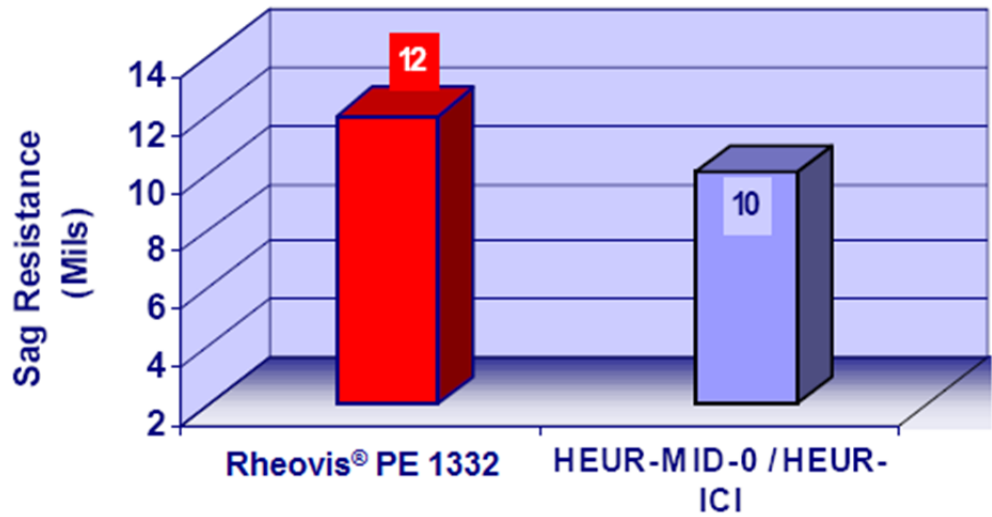


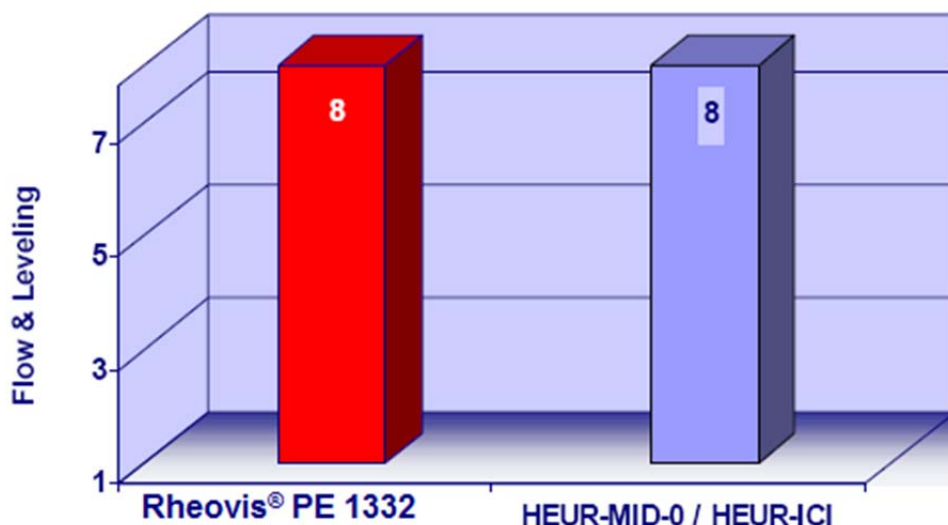
Rheovis[®] PE 1332 use level has minimal impact on paint KU's and shows 5-8 units higher KU's response than competitive HEUR-ICI. This type of rheology behavior can help achieve desired rheology profile with minimal reformulation effort.



Improved low shear viscosity response can help improve sag resistance of paints.

Rheovis® PE 1332 shows better sag resistance and scrub resistance when compared against a competitive HEUR-ICI. It also shows excellent flow behavior.





Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Rheovis® PE 1332.

Storage

Rheovis® PE 1332 is subject to appropriate storage under the usual storage and temperature conditions, our products are durable for at least 1 year. The properties of the product are not affected by low temperatures but it should not be stored next to direct heat. Rheovis® PE 1332 is packaged in 55 gallon (200 liter) tight head, polyethylene/steel composite drums. Storage in a cool, dry place away from direct heat is recommended. Additional handling information is contained in a material safety data sheet which is available on request.

Important

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