



Dispex[®] Ultra PX 4290

Dispersing agent with a broad
use range and best results with
inorganic and organic pigments

Ludwigshafen, 09. April 2020



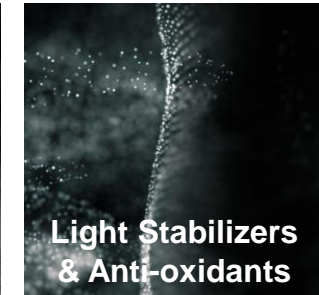
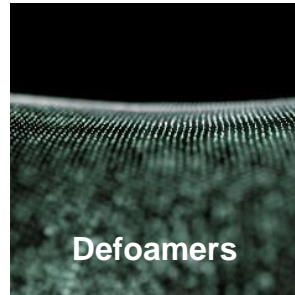
Peter Bene

**Technical Sales
Formulation Additives
EMEA region**

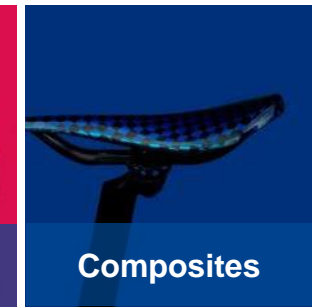
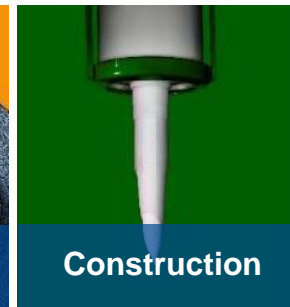
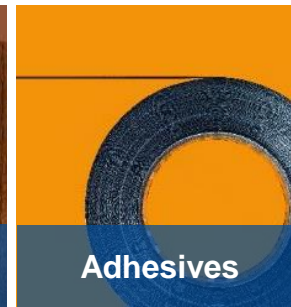
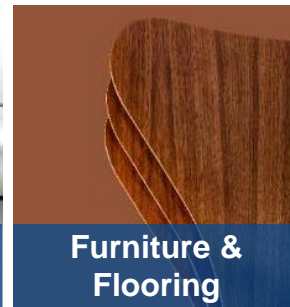
Agenda

1. Introduction
2. Performance highlights resin-free Pigment Concentrates
3. Performance highlights Furniture & Flooring
4. Performance highlights Printing & Packaging
(e.g. ink-jet inks)
5. Summary

Our comprehensive portfolio enables solutions for various industries



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



Strong brands to empower your business

Water-based brands	Application	Solvent-based* brands
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

A typical challenge...

many standard dispersing agents only show peak performance with a few pigments.

Customers are increasingly looking for dispersing agents with a broad use range and best results with both inorganic and organic pigments.



...a simple solution

Dispex[®] Ultra PX 4290 is a broad spectrum, high molecular weight dispersing agent for a broad range of both - organic and inorganic - pigments in aqueous coating systems, printing inks and adhesives.

with excellent pigment stabilizing characteristics

and outstanding color strength and viscosity reduction

This allows higher pigment loadings while excellent flow characteristics are maintained.

Dispex® Ultra PX 4290

New high molecular weight dispersing agent for organic and inorganic pigments in aqueous coating systems, printing inks and adhesives.



Application:

Dispex® Ultra PX 4290 is a dispersing agent for organic and inorganic pigments in aqueous systems.

Due to the excellent stabilizing characteristics, outstanding color strength and excellent viscosity reduction can be achieved.

This allows also higher pigment loadings while excellent flow characteristics are maintained.

Sustainability highlights:

- Label-free
- Food Contact Compliance
- Suitable for a broad range of applications

Performance highlights:

- Designed to stabilize inorganic and organic pigments in aqueous formulations
- Improved color strength and transparency
- Improved gloss
- Anti-flooding behavior
- Excellent flocculation stability
- Solvent-free

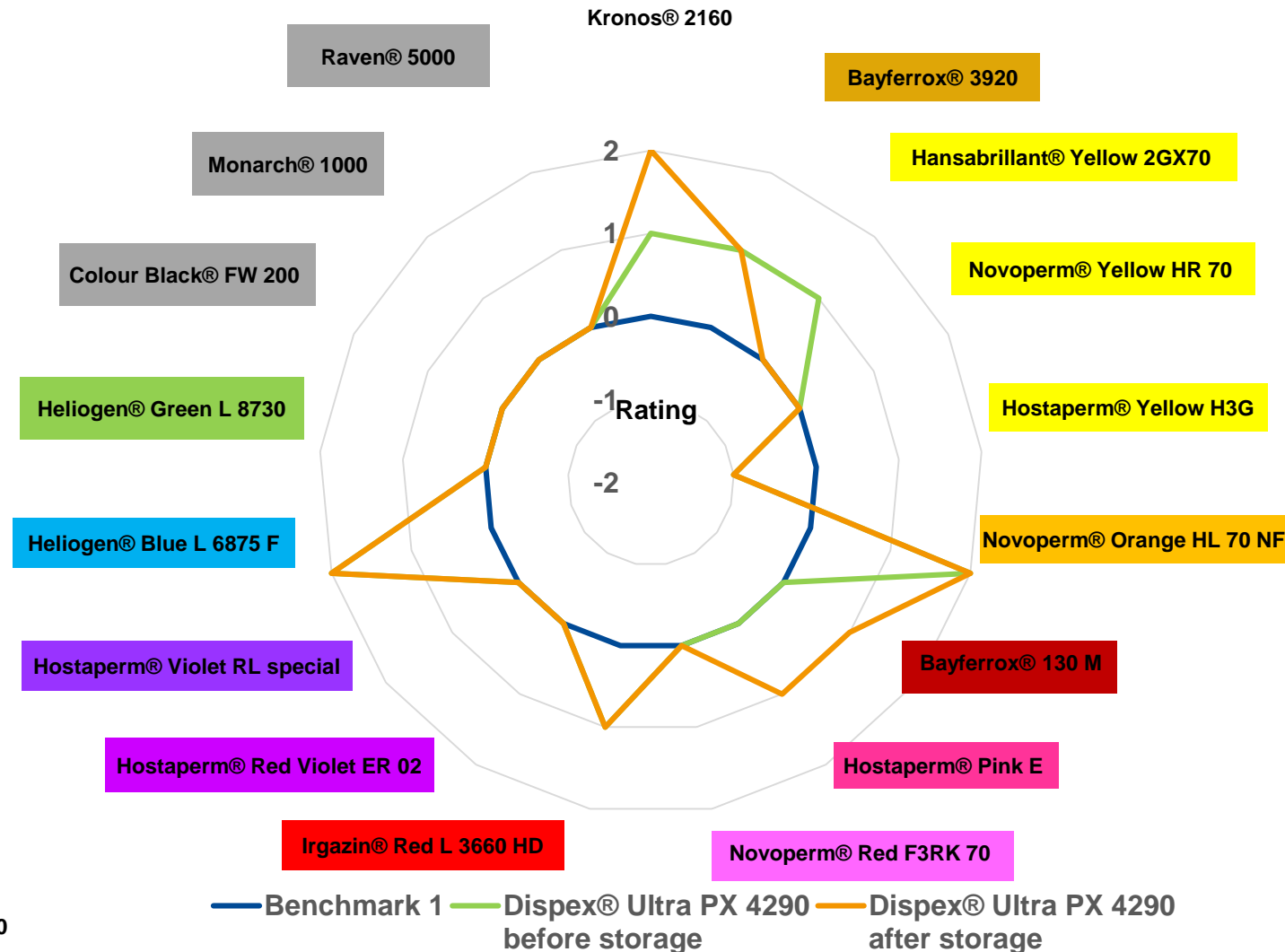
Characteristic Values:

Appearance	Clear, yellowish liquid
Solvent	water
Density	~ 1.06 g/cm ³
Active content	~ 40%

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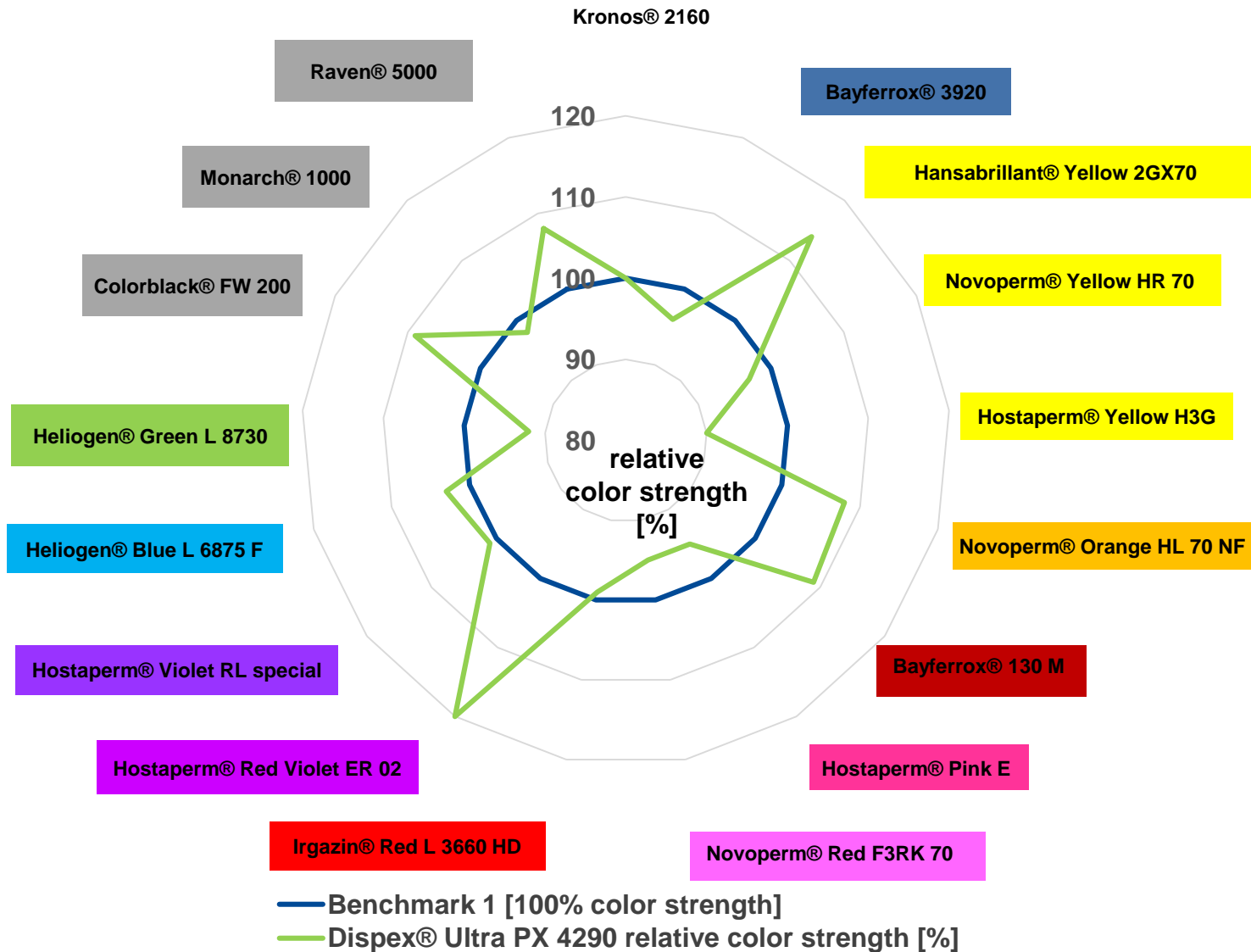
Dispex® Ultra PX 4290 offers excellent pigment stabilizing characteristics with inorganic and organic pigments



Viscosities of resin-free Pigment Concentrates before and after storage (2w 50°C).

Rating: 2 – much better
 1 – better
 0 – equal to standard

...and outstanding color strength and viscosity reduction

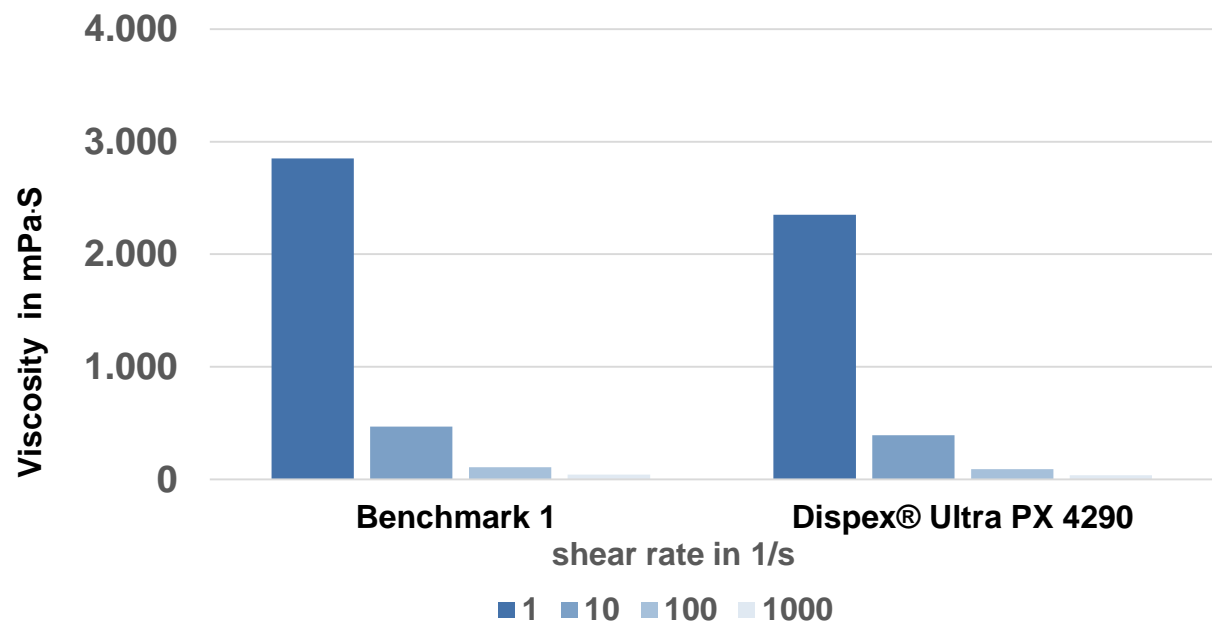


Relative color strength of resin-free Pigment Concentrates.

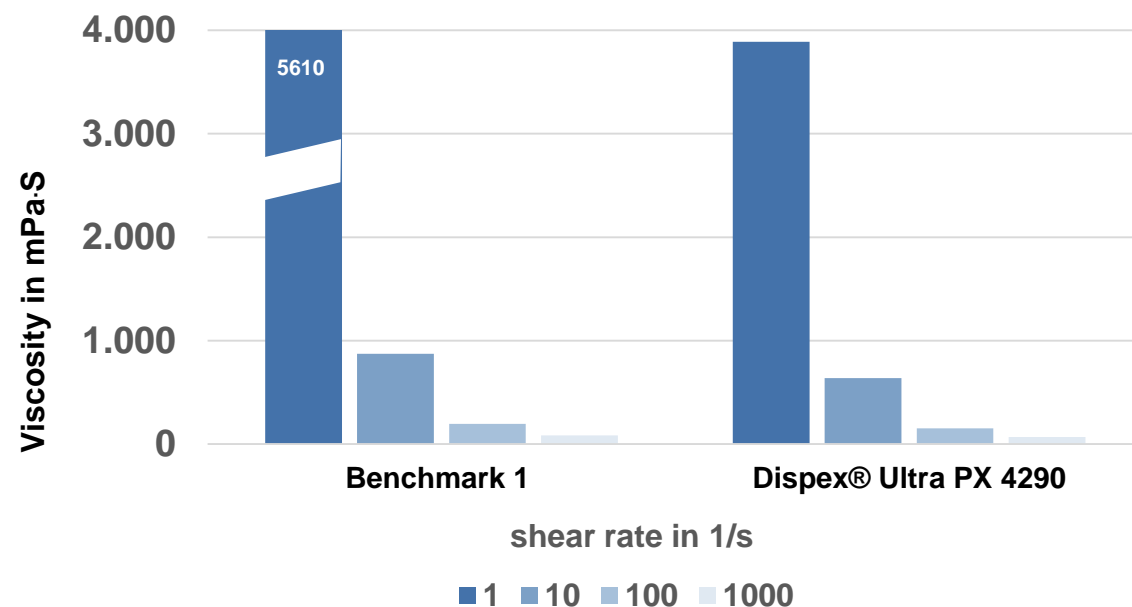
2% Pigment Concentrate in Rubbol BL Azura (wb white PU/Alkyd paint)

Storage stability of Pigment Concentrate based on PR 101 (Bayferrox[®] 130 M)

Before storage

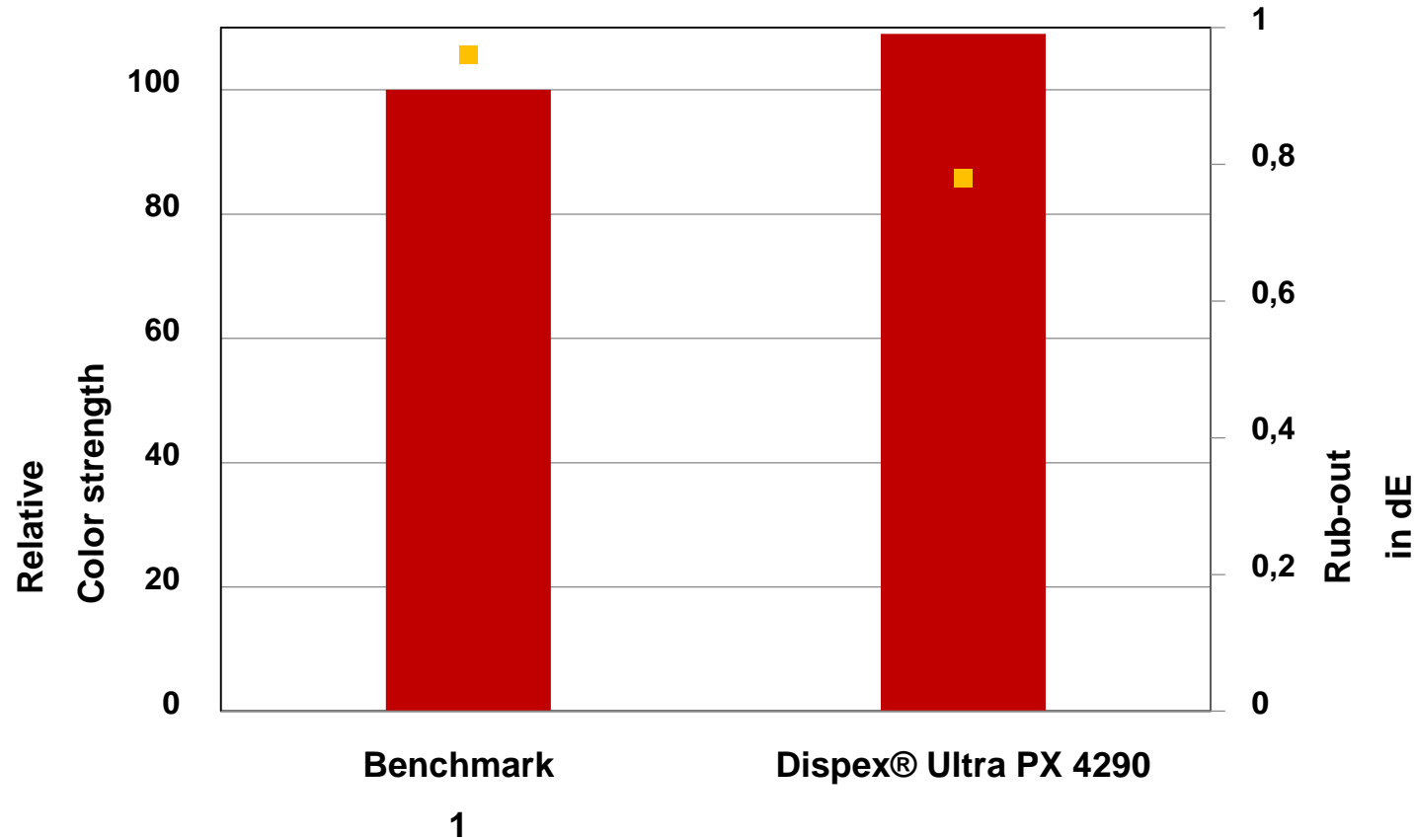


After 2 weeks at 50°C



Dispex[®] Ultra PX 4290 shows lower viscosity after 2 weeks at 50°C.

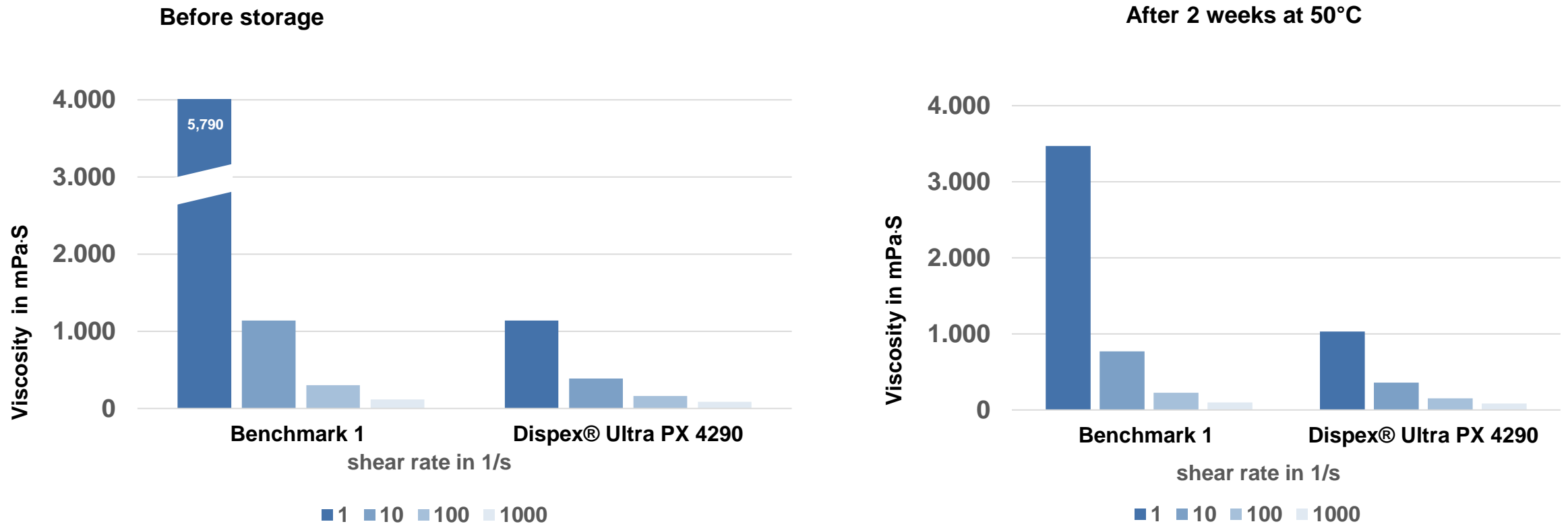
Color strength and rub-out dE with paint based on PR 101 (Bayferrox® 130 M)



*2% Pigment Concentrate in
Rubbol BL Azura (wb white PU/Alkyd paint)

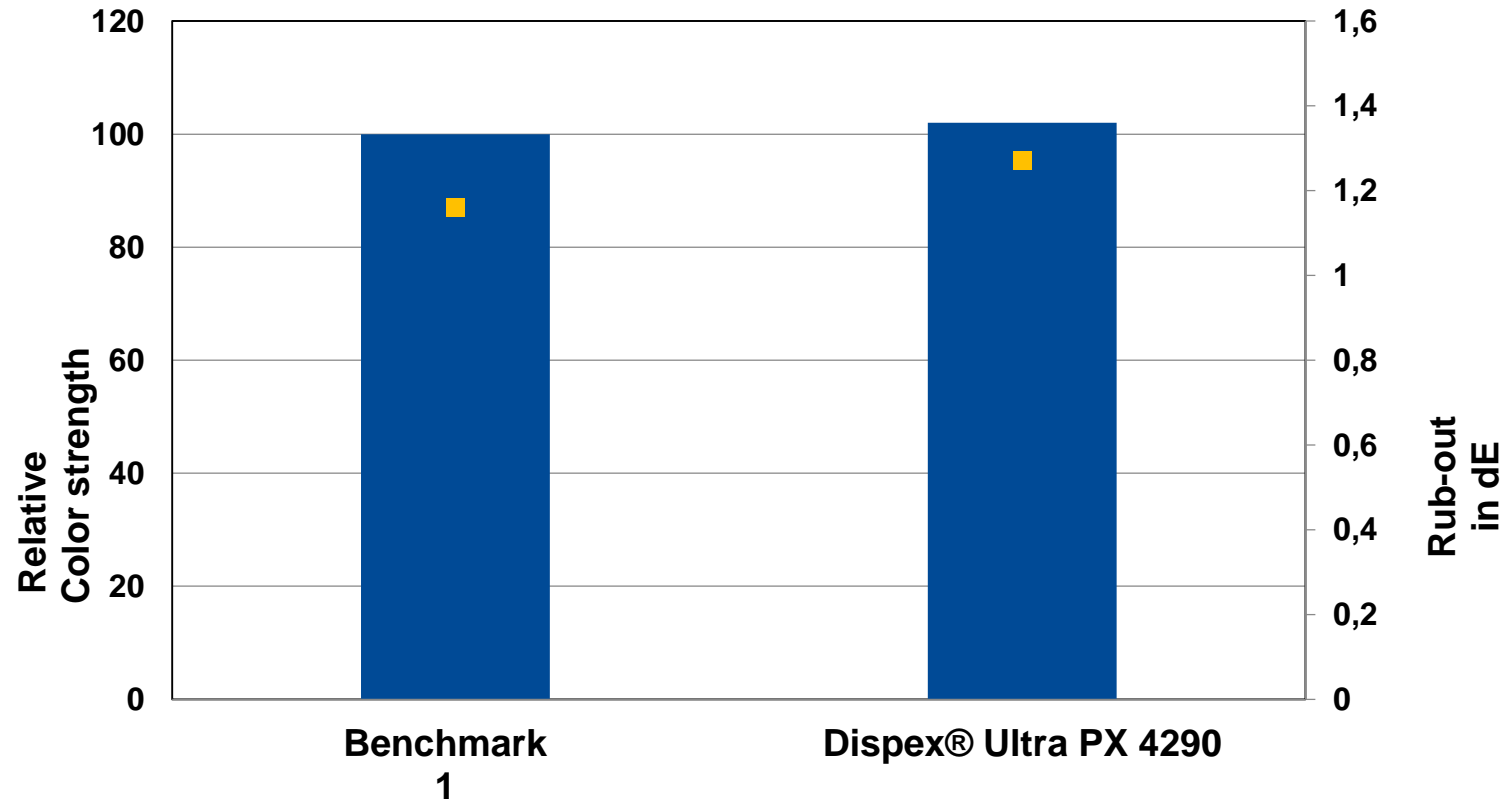
Dispex® Ultra PX 4290 imparts higher color strength and improved rub-out.

Storage stability of Pigment Concentrate based on PB 15:3 (Heliogen® Blue L 6875 F)



Dispex® Ultra PX 4290 shows lower viscosity initially and after 2 weeks at 50°C.

Color strength and rub-out dE with paint based on PB 15:3 (Heliogen Blue L 6875 F)



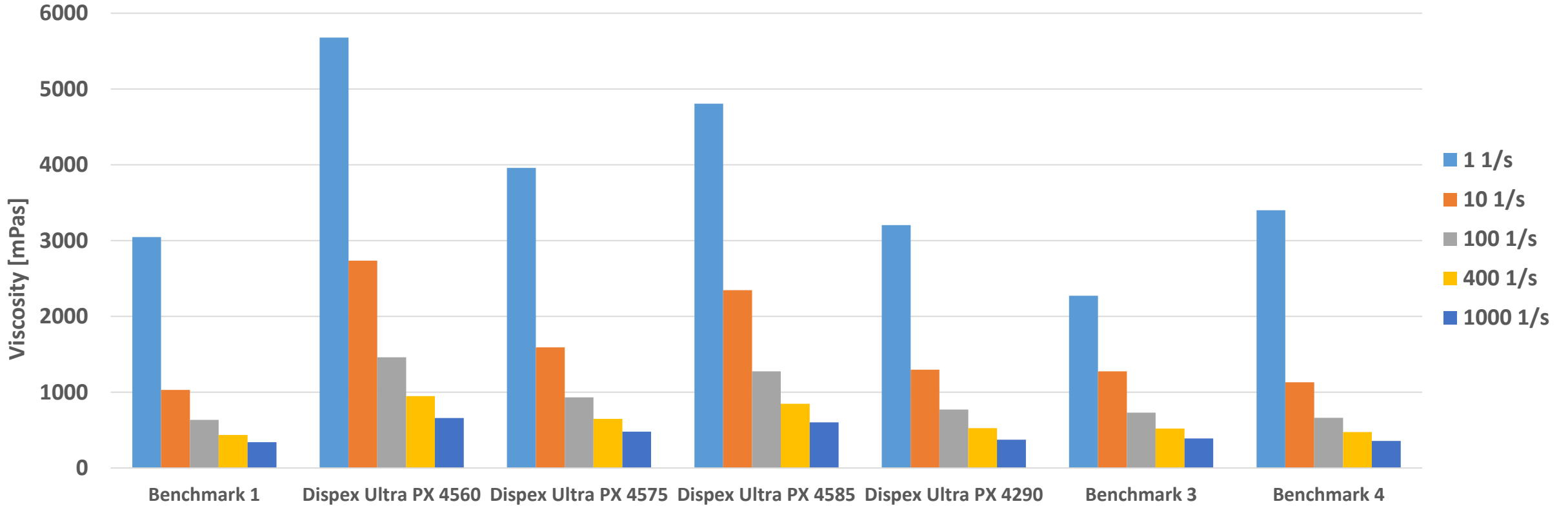
*2% Pigment Concentrate in
Rubbol BL Azura (wb white PU/Alkyd paint)

Dispex® Ultra PX 4290 shows comparable color strength and rub-out .

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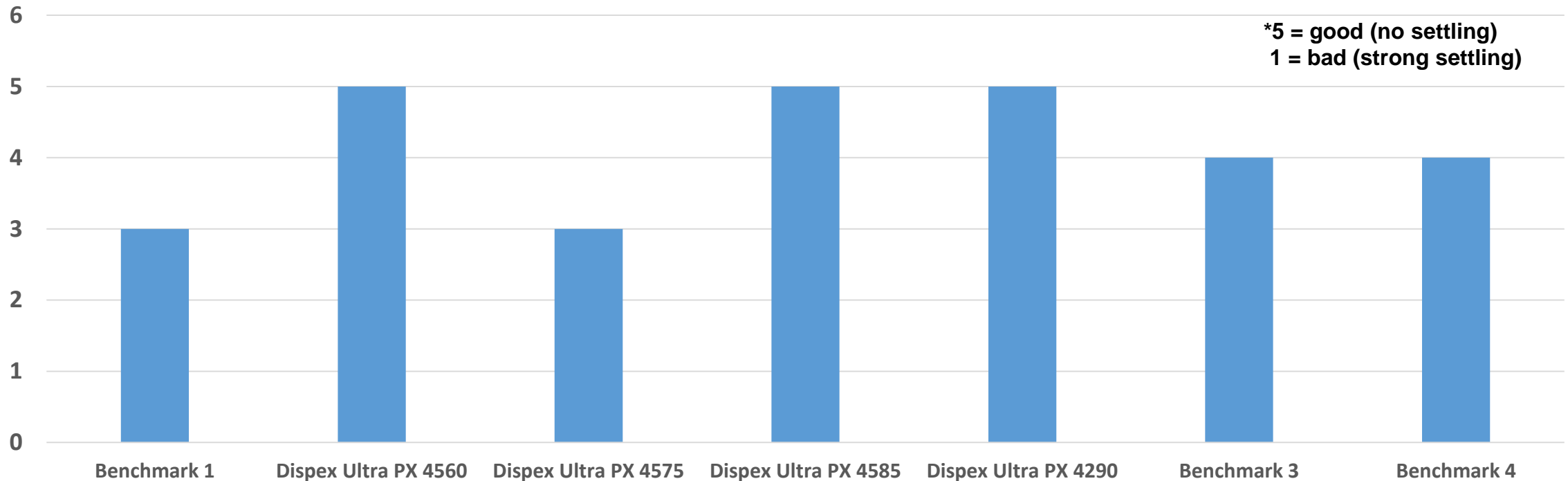
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Rheological behavior in a wb white wood coating based on Joncryl® 9500



Dispex® Ultra PX 4290 shows comparable to better results in terms of rheology vs. most benchmarks.

Anti-settling behavior after storage in white wood coating based on Joncryl® 9500



Dispex® Ultra PX 4290 shows better results with regards to settling of TiO₂ against benchmarks . In addition stain resistance was comparable vs. internal and external standards.

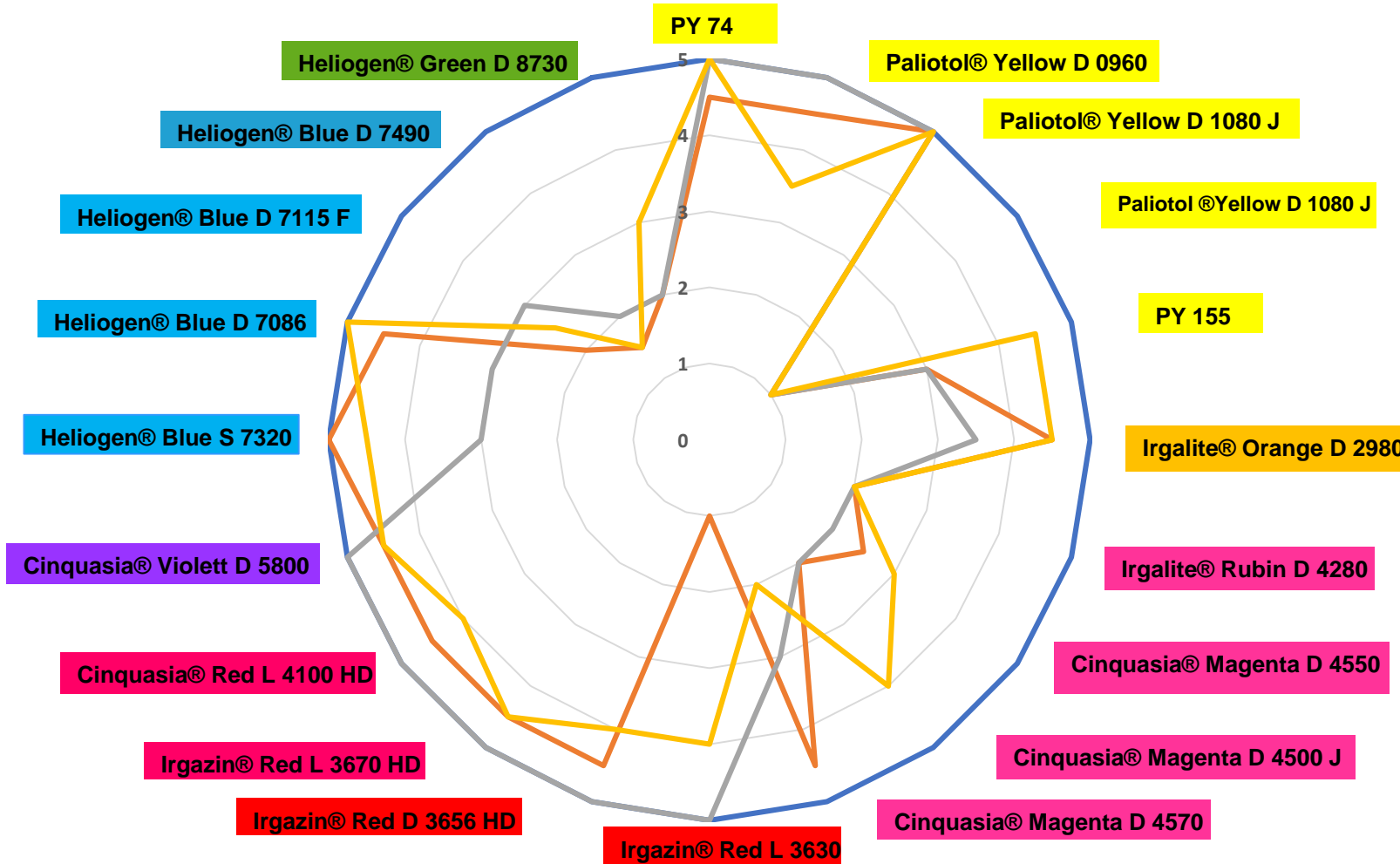
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Dispex® Ultra PX 4290 offers excellent pigment stabilizing characteristics with inorganic and organic pigments

— Dispex® Ultra PX 4290 — Dispex® Ultra PX 4575
— Dispex® Ultra PX 4585 — Dispex® Ultra FA 4437

Overall rating Pigment Concentrate with Dispex® Ultra PX 4290

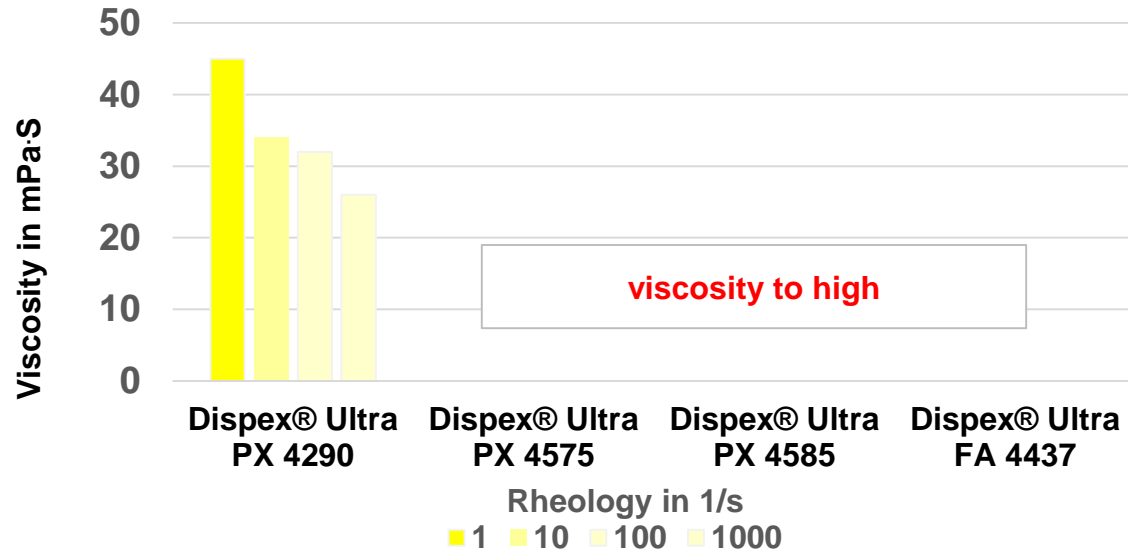


Overall performance rating

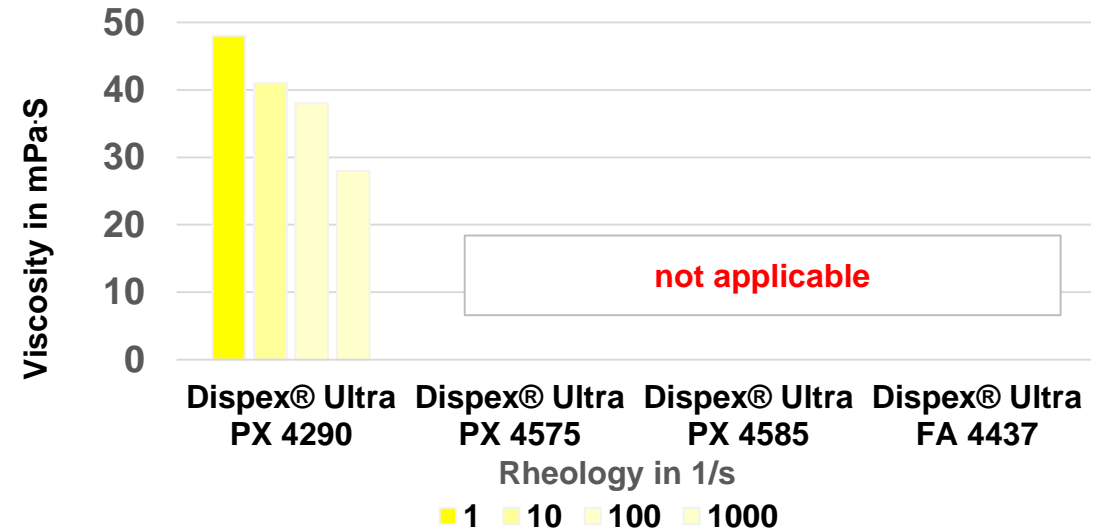
Rating: 5; 4-5 – best
 4 – acceptable
 < 3-4 – not acceptable.

Performance tests – Formulation based on PY 150 (Paliotol® Yellow D 1085 J)

Before storage

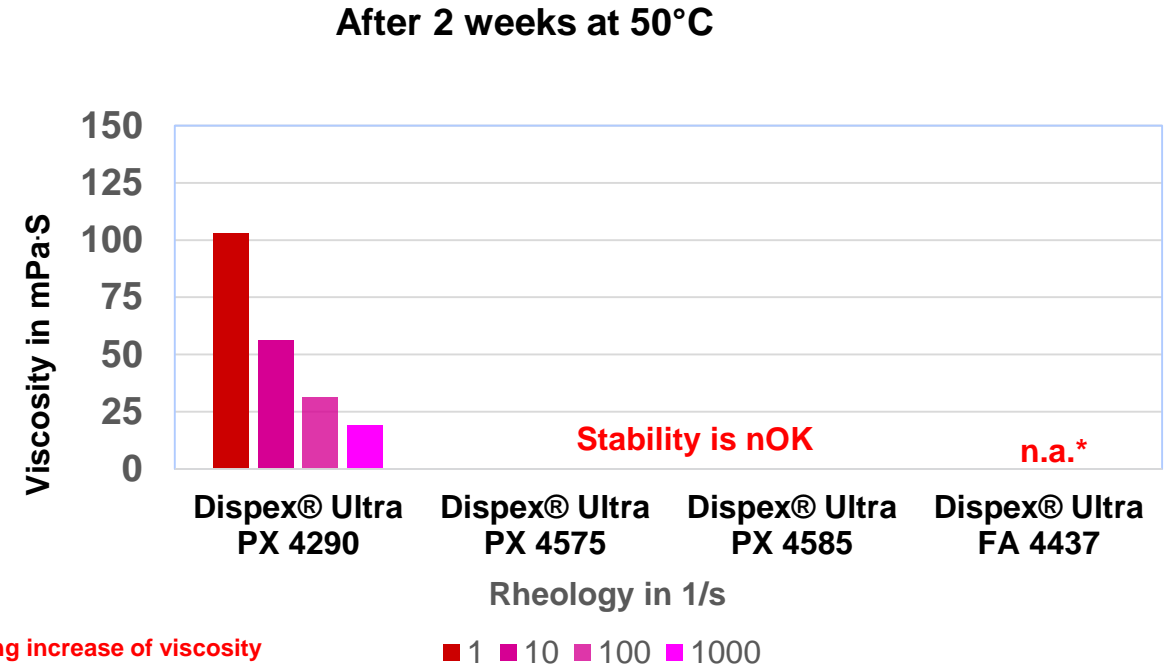
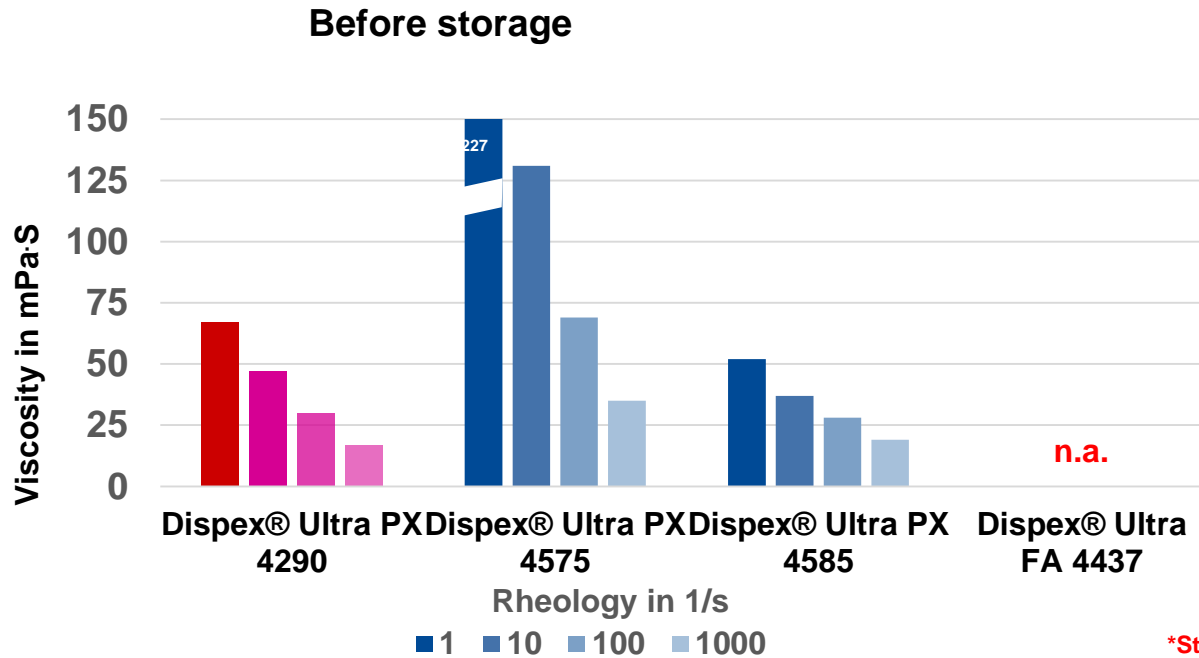


After 2 weeks at 50°C



Dispex® Ultra PX 4290 shows best viscosity even after storage. Anti-settling and particle size was also very good.

Performance tests – Formulation based on PR 57:1 (Irgalite® Rubine D 4280)



Dispex® Ultra PX 4290 shows best viscosity even after storage in comparison to benchmarks. Anti-settling and particle size was also very good.

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Summary

Dispex® Ultra PX 4290

- Excellent pigment stabilizing characteristics with a broad range of organic pigments but also for inorganics like TiO_2
 - Results in outstanding color strength and viscosity reduction,
 - which allows higher pigment loadings whilst maintaining excellent flow characteristics
 - which leads to an enhanced formulation flexibility
- New dispersant for water-based applications for a broad range of applications such as
 - Printing and Packaging (ink-jet, but also resin-free and resin-based Flexo inks)
 - Furniture and Flooring
 - General Industrial
 - Resin-free Pigment Concentrates for industrial applications

Contacts



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We create chemistry