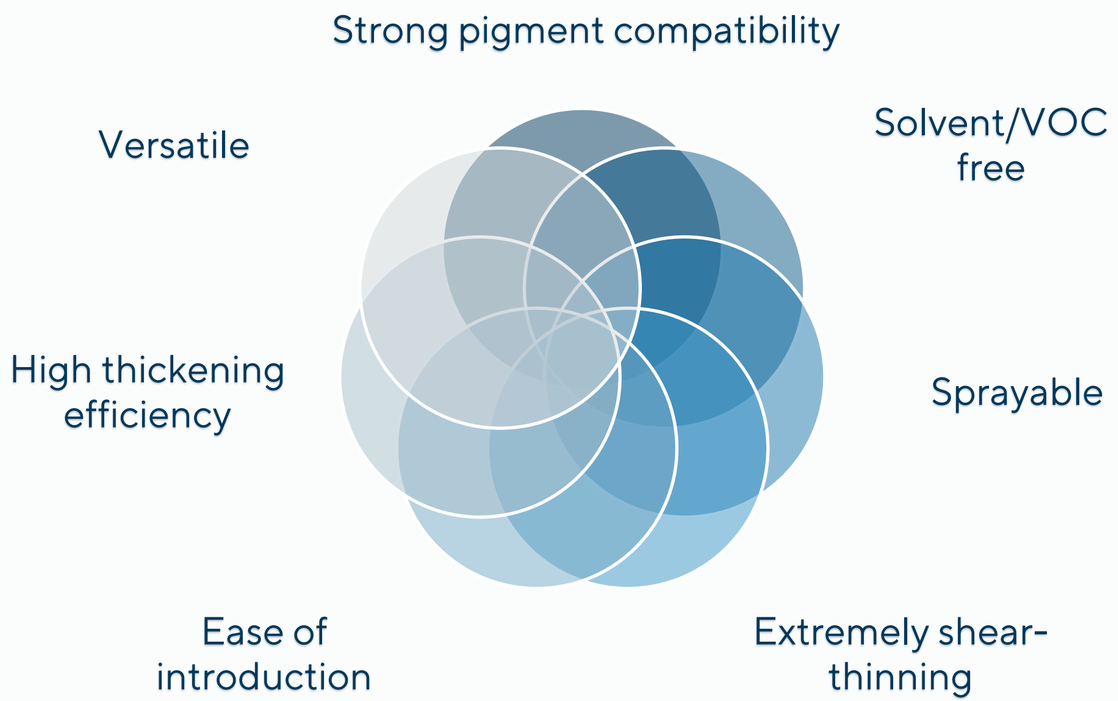
VISCOLAM PS 010 AIR

Solvent-free Strongly shear-thinning rheology modifier with high pigment compatibility

Viscolam® PS 010 AIR



Viscolam PS 010 AIR: table of contents

Performance has been evaluated in 3 different formulations.

In all tests, the same medium shear viscosity has been set as a target:
100 KU Stormer Viscosity

Required dosage and all the other properties listed in this slide were checked accordingly

PVC 60 Styrene Acrylic wall paint

- Required Dosage
- Low shear/Brookfield viscosity
- Pigment Compatibility
- Sag Resistance
- Rheology

PVC 20 Acrylic wall paint

- Required dosage
- Pigment Compatibility
- Low shear viscosity
- Sag Resistance
- Rheology

Wood Acrylic finishing

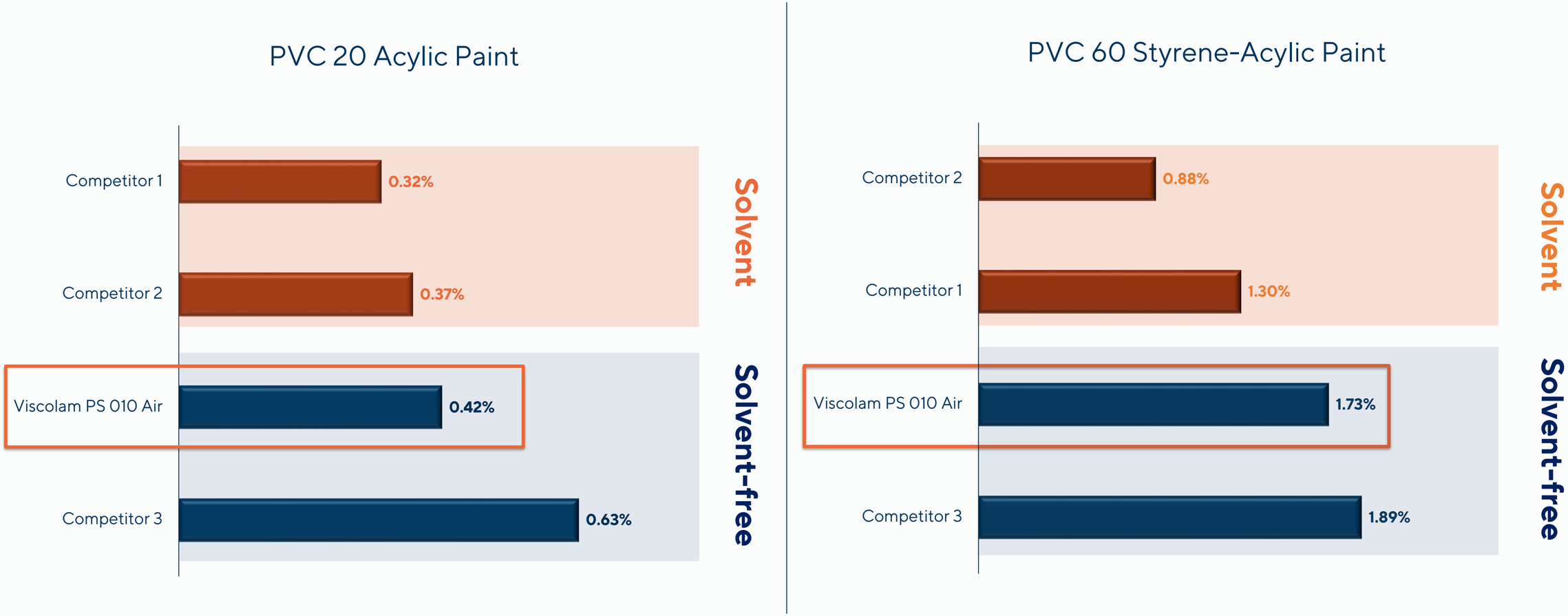
- Ease of introduction
- Low shear viscosity
- Viscosity retention after coalescing agent (BDG)
- Sag resistance
- Sprayability
- Rheology

Viscolam PS 010 AIR

Test in wall paints

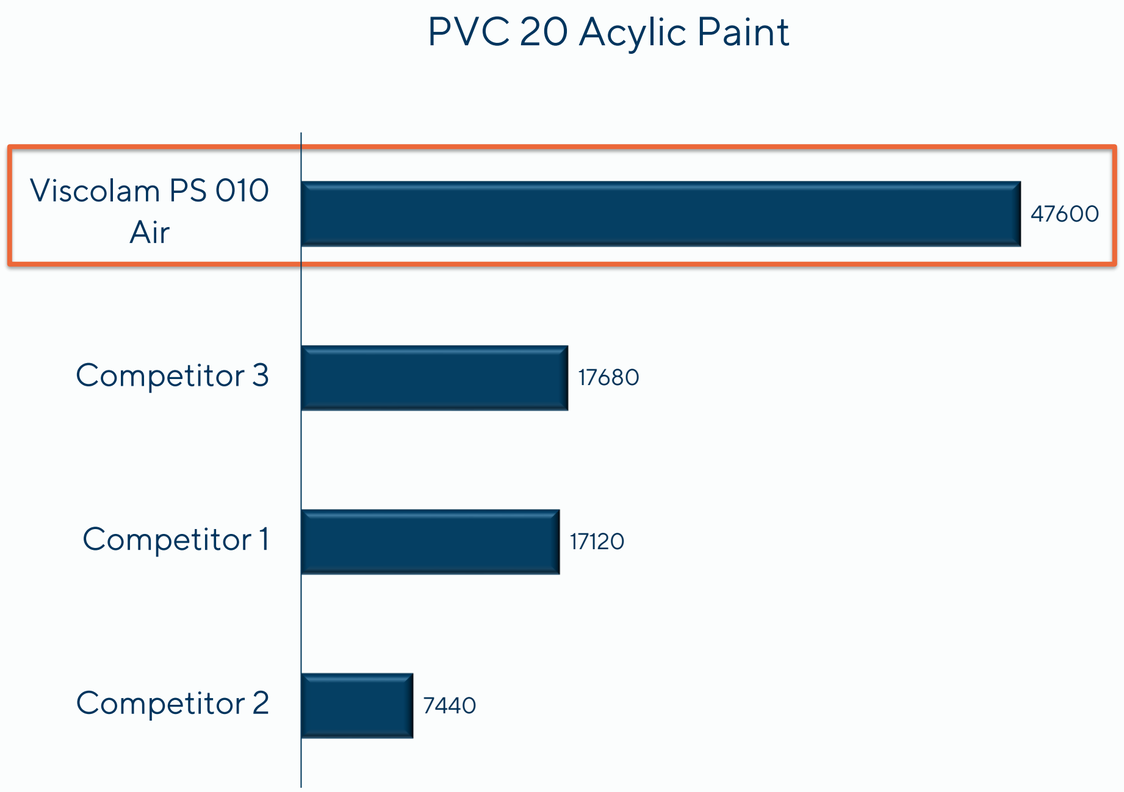
Efficiency

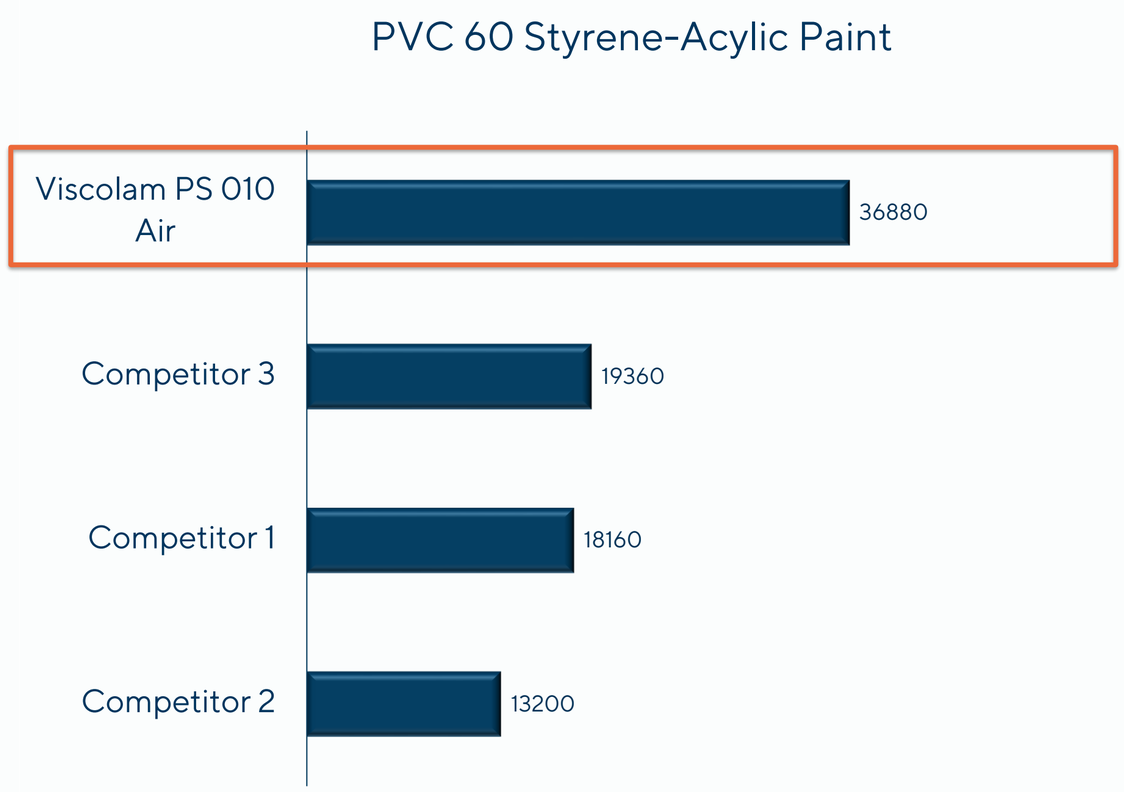
Thickening efficiency: required dosage to reach the same mid-shear viscosity (100 KU Stormer), in two different systems



Low-shear contribution

Low-shear contribution (0.5 rpm Brookfield viscosity at 20°C) of each thickener in the same paints as the previous slide

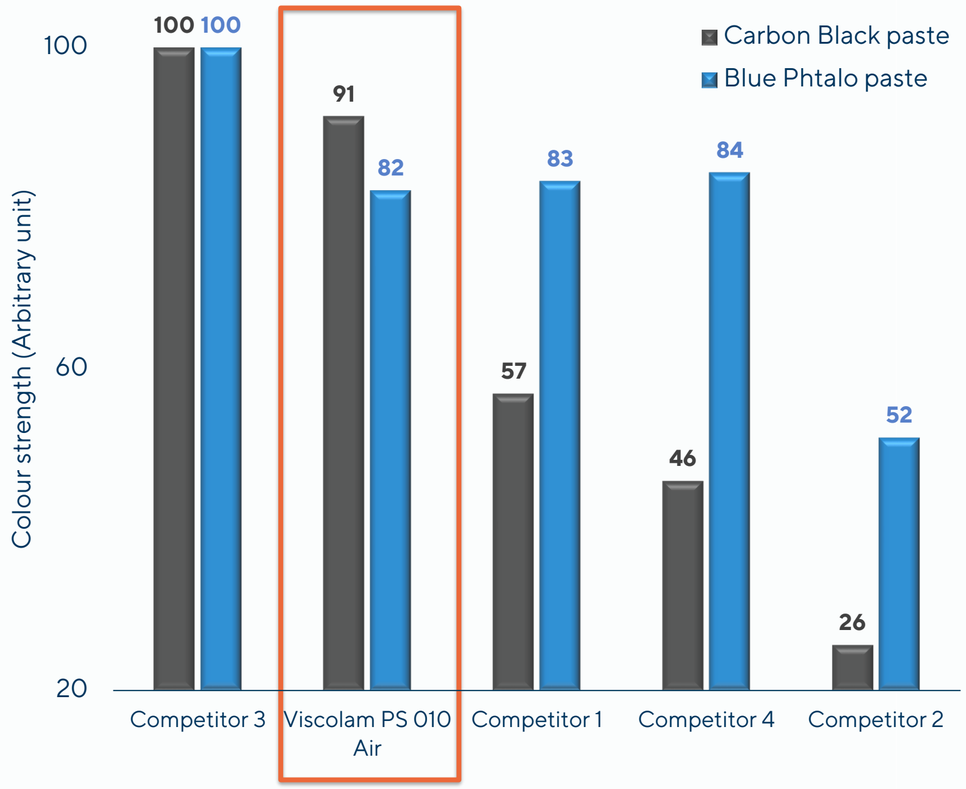




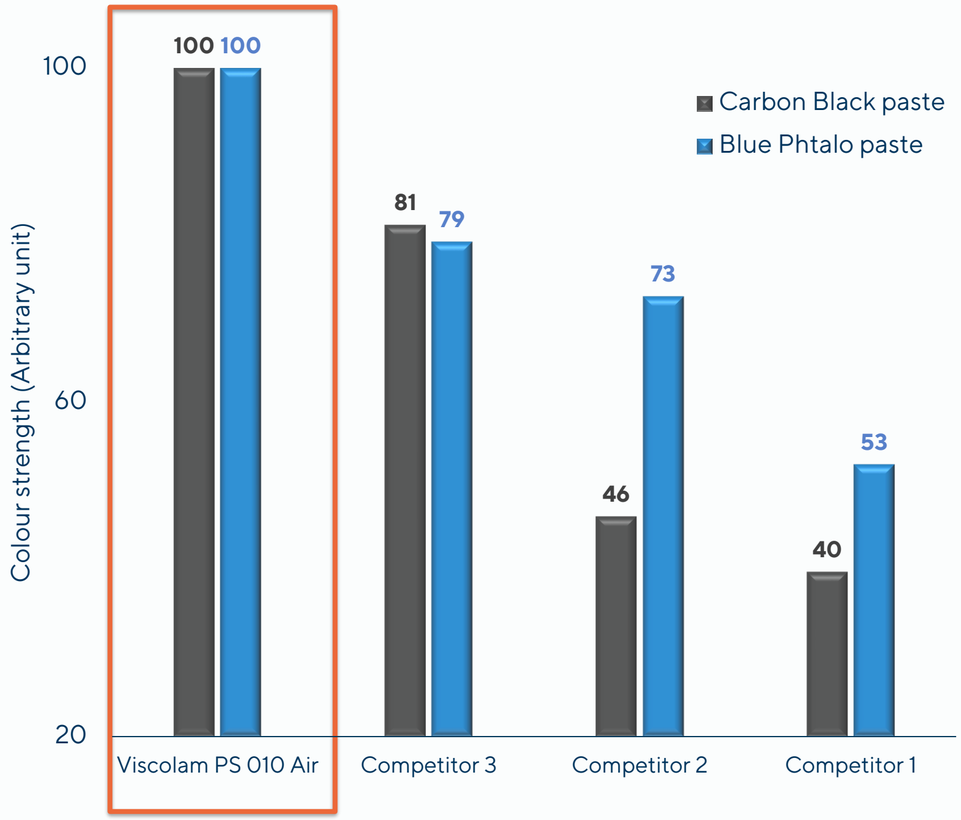
Pigment compatibility

Effect on colour strength of Phthalo Blue and Carbon Black pigment paste: tests on 20% and 60% PVC paints from the previous slide, using 2% pigment paste

PVC 20 Acrylic Paint



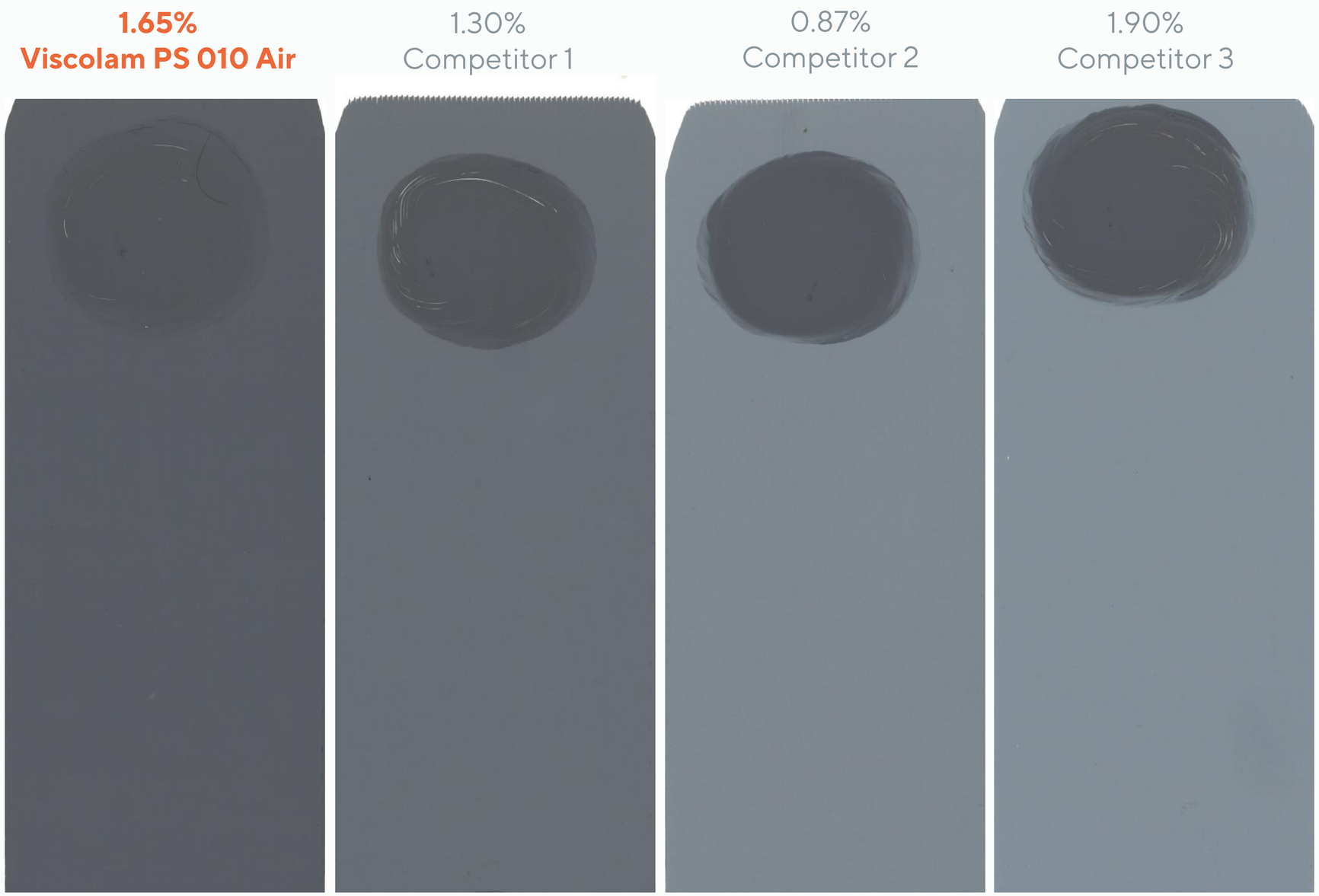
PVC 60 Styrene-Acylic Paint



Pigment compatibility

PVC 60
Styrene-Acrylic Paint

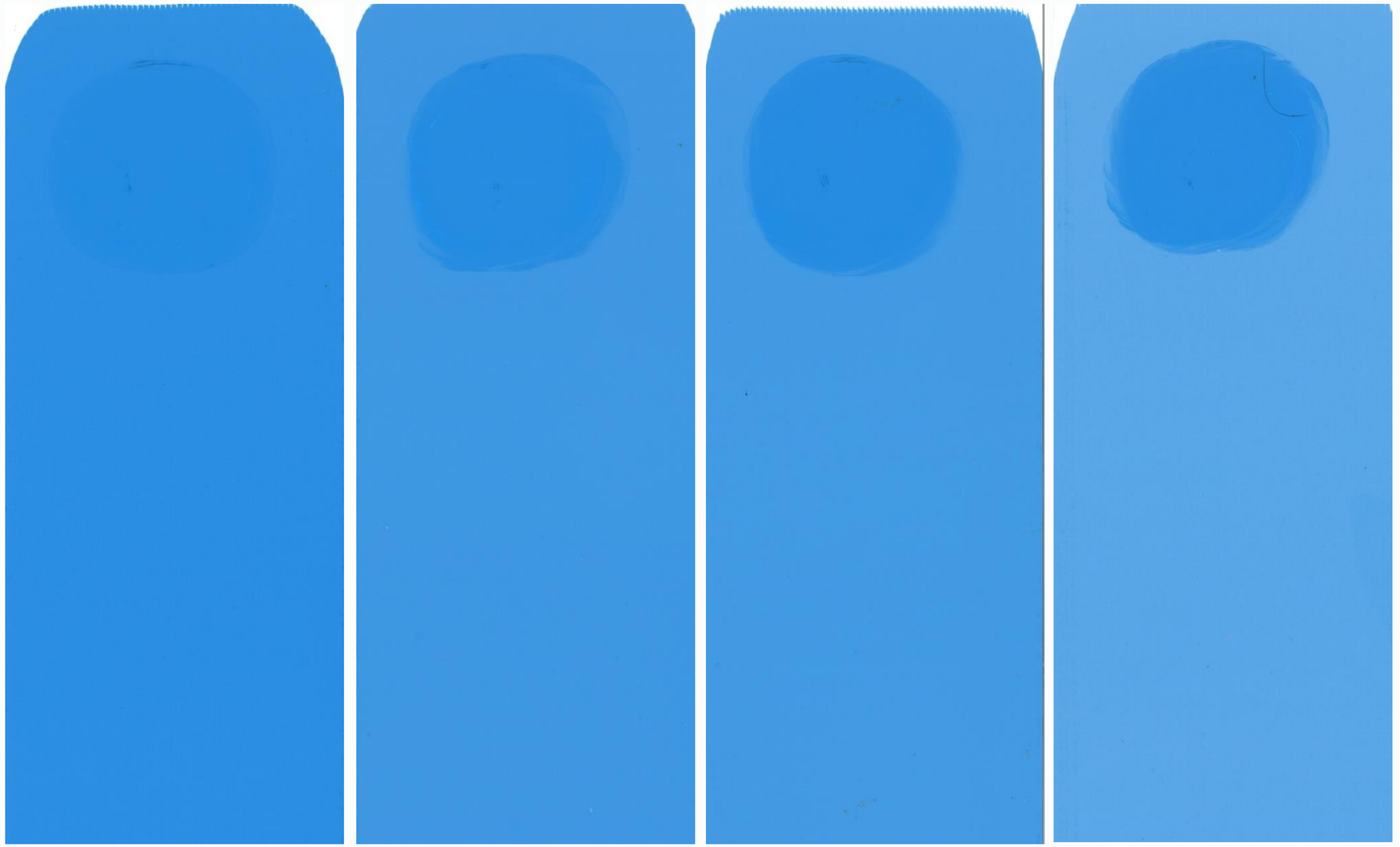
Carbon black pigment paste:
2% Preto DBK
(stress test in a problematic system with colorants)



Pigment compatibility

PVC 60
Styrene-Acrylic Paint

Phthalocyanine Blue pigment paste:
2% Azul DFG
(stress test in a problematic system with colorants)

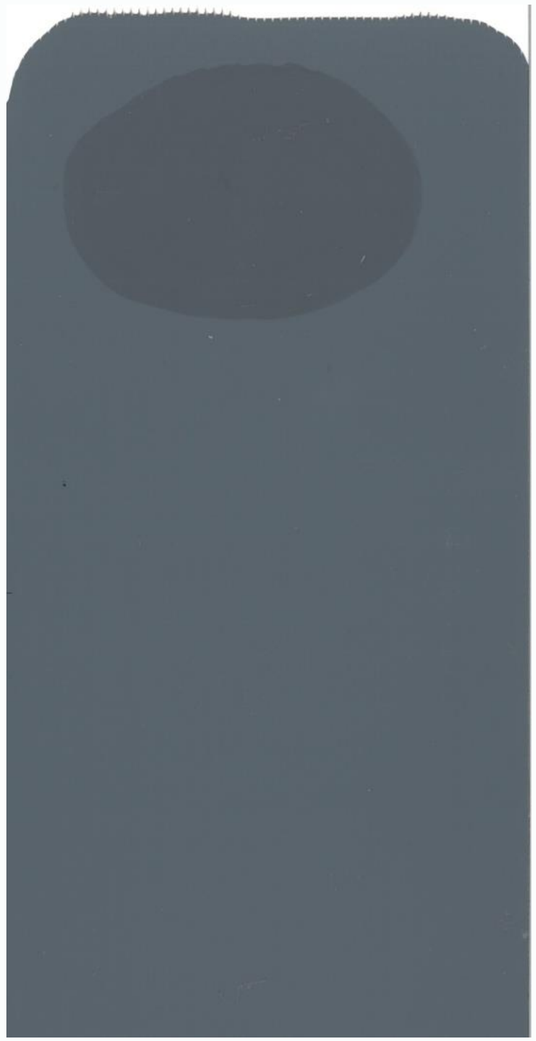


Pigment compatibility

PVC 20
Acrylic Enamel Paint:

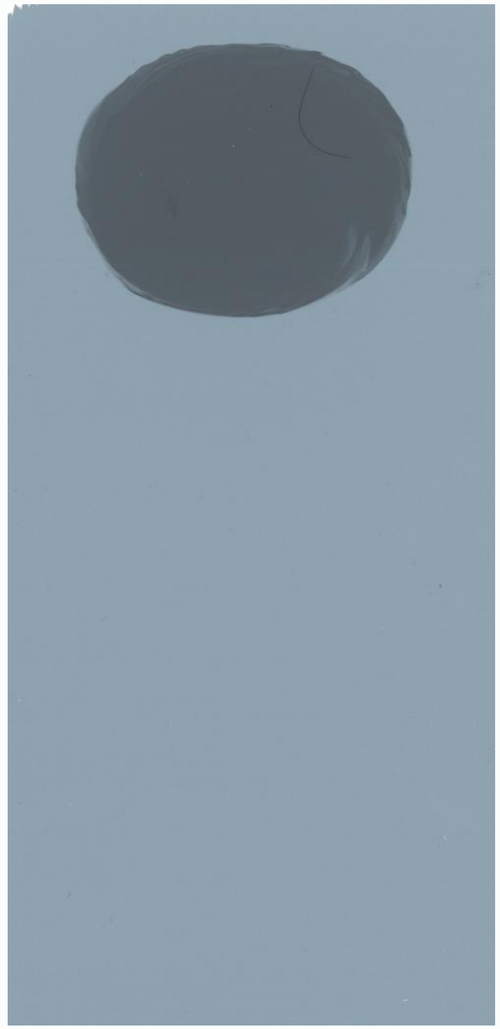
Carbon black pigment paste:
2% Preto DBK
(stress test in a problematic system with colorants)

Viscolam PS 010 Air



Competitor 3

Competitor 2



Pigment compatibility

PVC 20
Acrylic Enamel Paint:

Phthalocyanine Blue pigment paste:
2% Azul DFG
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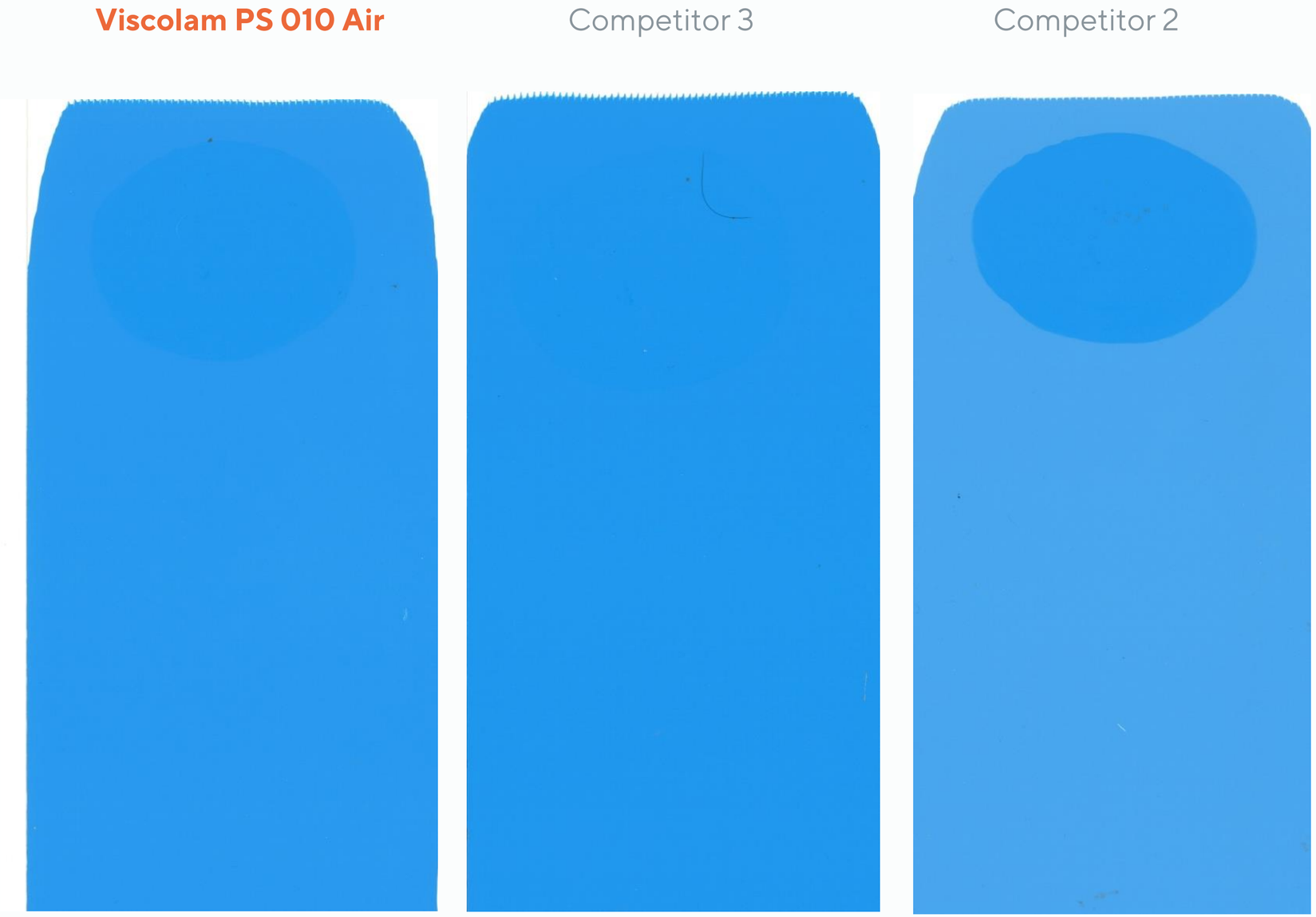
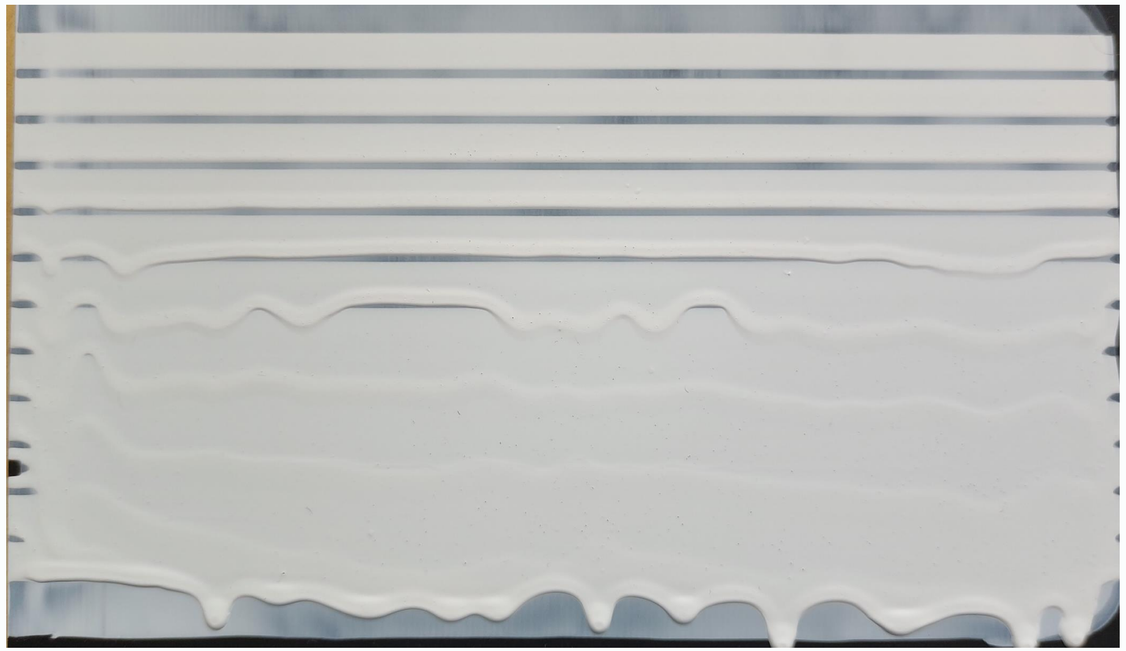


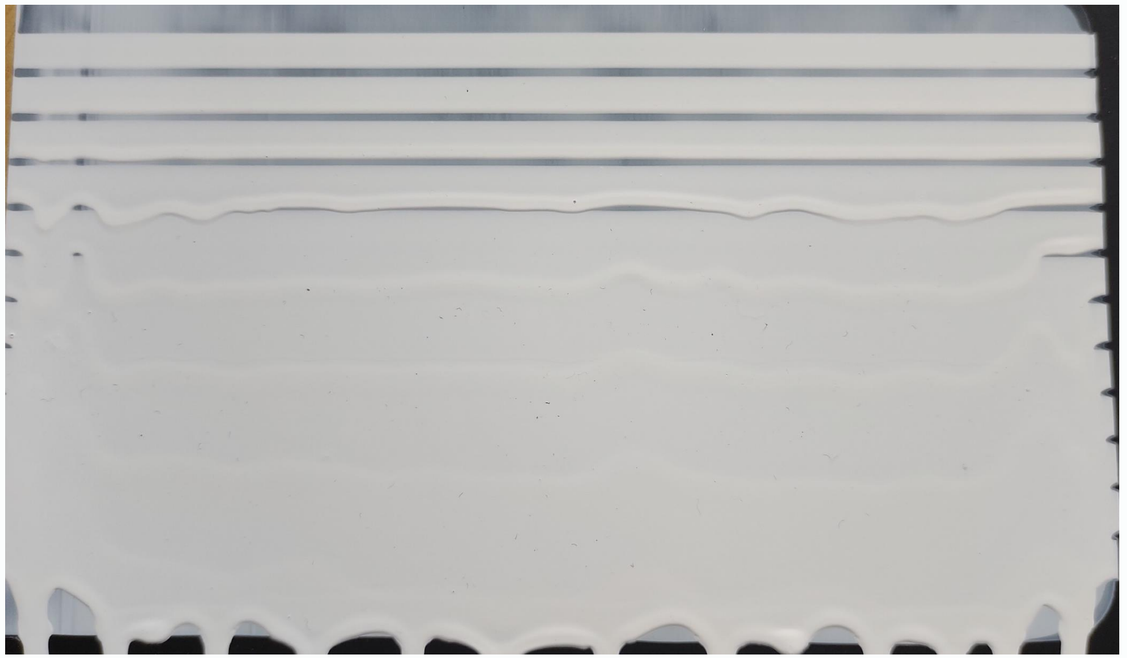
Sag resistance

Viscolam PS 010 AIR vs. Market Benchmark Competitor 1
Test performed on the same paints as the previous slides

Viscolam PS 010 Air



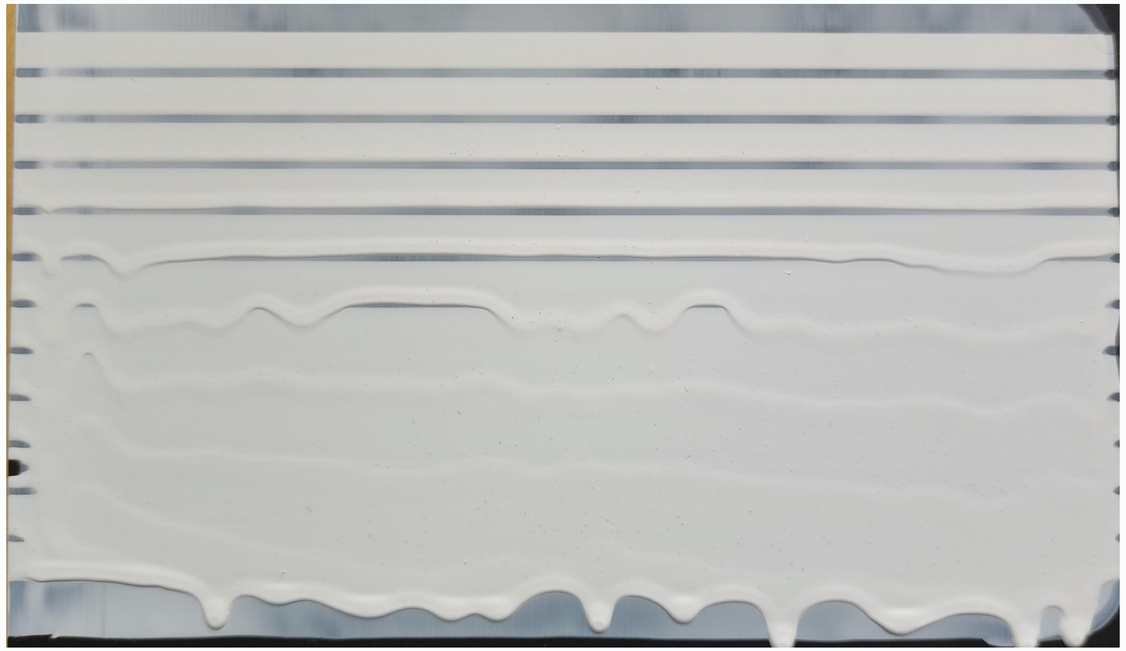
Competitor 1



Sag resistance

Viscolam PS 010 AIR vs. Market Benchmark Competitor 3 (solvent-free)
Test performed on the same paints as the previous slides

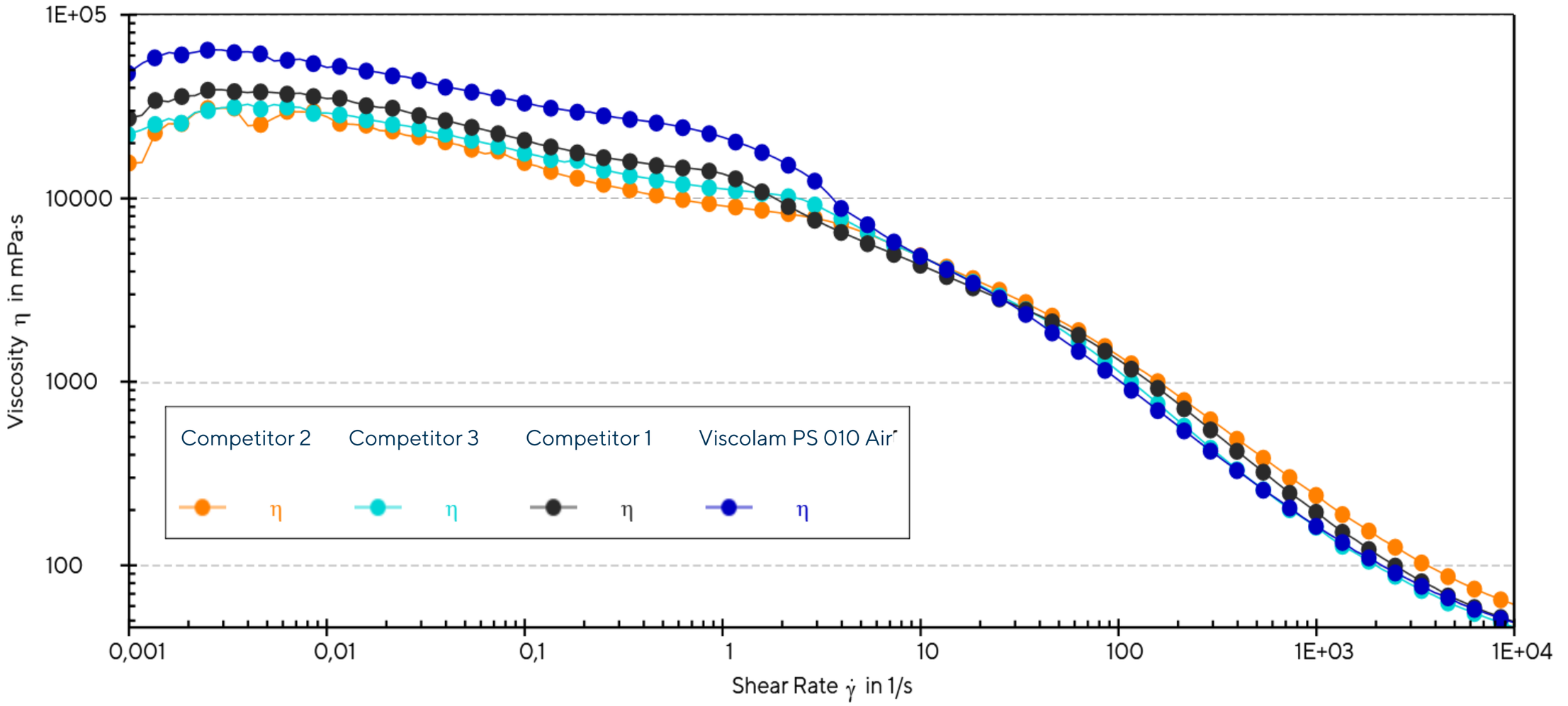
Viscolam PS 010 Air



Competitor 3

Rheology

Rheology profiles confirm the application properties showed above:
when comparing paints with the same Stormer viscosity, the one formulated with Viscolam PS 010 AIR has higher sag resistance, thanks to its higher contribution to the low-shear viscosity



Viscolam PS 010 AIR in wall paints provides:

Thickening Efficiency

Viscolam PS 010 AIR when used at the same dosage as competitive thickeners provides much higher low shear viscosities and anti-sagging properties. Conversely, when a defined sag resistance is desired, Viscolam PS 010 AIR can achieve comparable performance to competitive grades with a significantly reduced dosage

Pigment Compatibility

Viscolam PS 010 AIR demonstrates, on average, higher pigment compatibility compared to competitive products: color strength is improved and related rub-out problems are significantly reduced

Sustainability

Viscolam PS 010 AIR is solvent and VOC free, and contains 23% bio-based content*

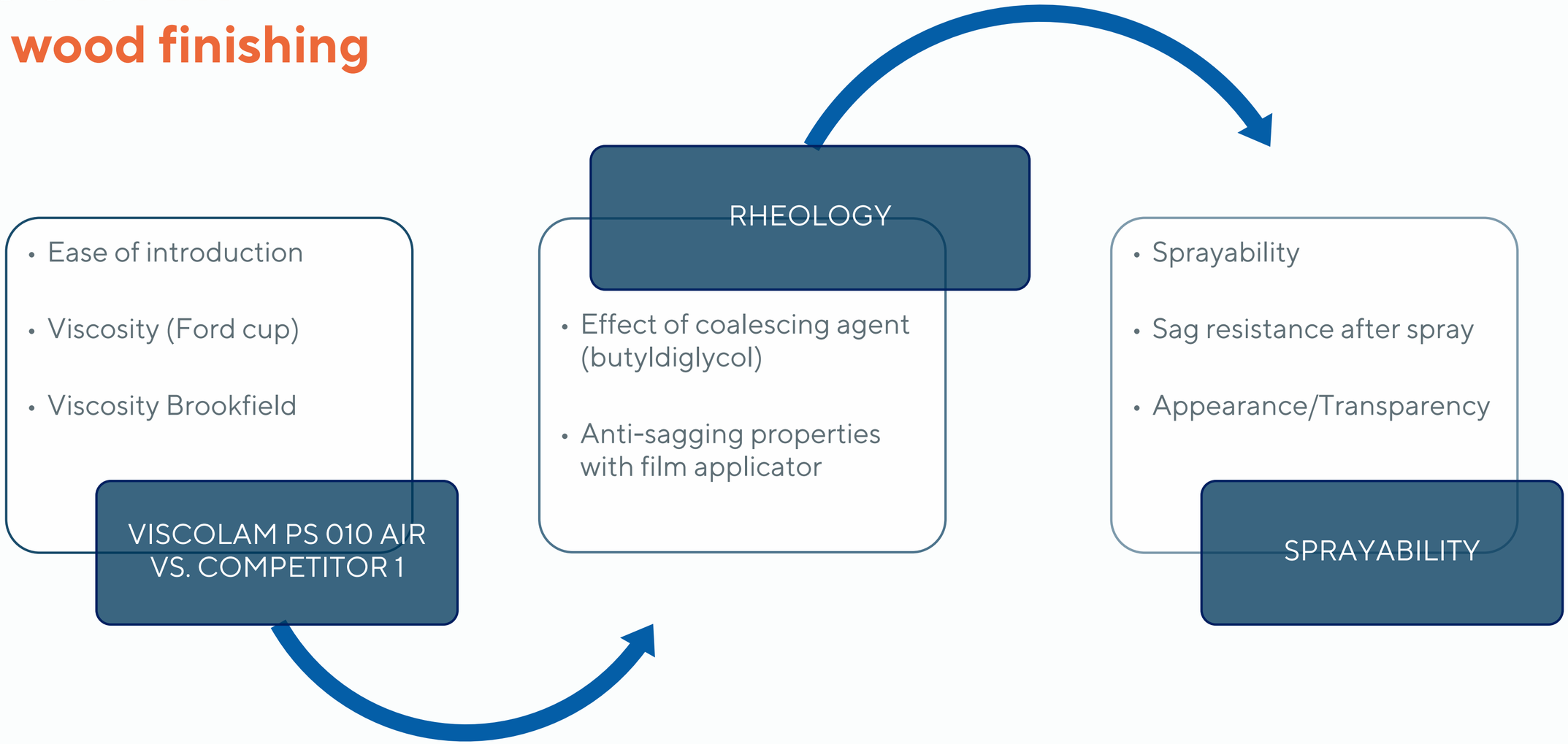
**according to EN 16785:2*

Viscolam PS 010 AIR

Test in wood acylic finishing for vertical surfaces

Viscolam PS 010 AIR in wood finishing

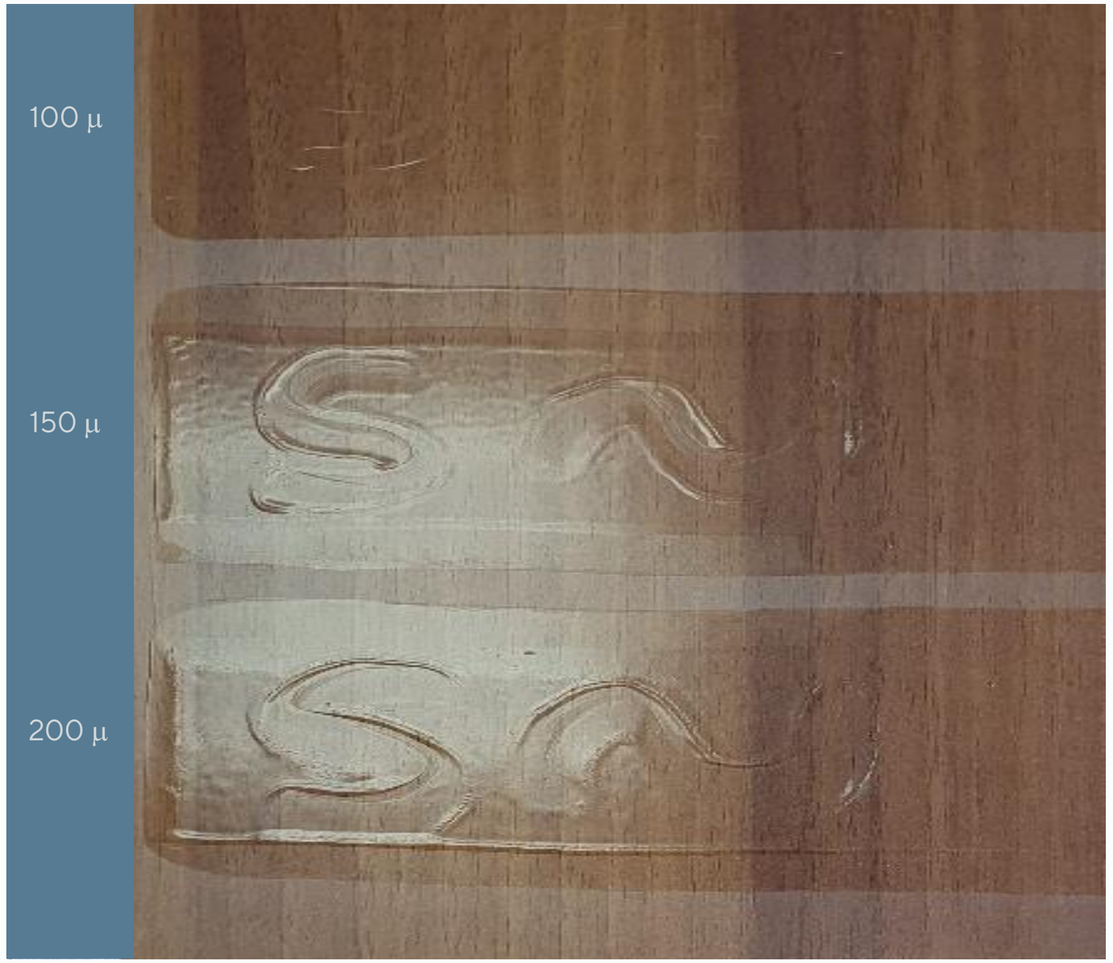
Wood acrylic finishing for vertical surfaces – screening protocol



Sagging

sag resistance at 100, 150 and 200 mm – film applicator

Competitor 1



Viscolam PS 010 AIR

Sagging (spray)

sag resistance at 150 mm – spraying

Competitor 1

Viscolam PS 010 AIR

Viscolam PS 010 AIR: Overall scores

Wood acrylic finishing for vertical surfaces – overall results
Test performed using a 1:1 replacement of competitive product, irrespective of the different active content

Key property	Viscolam PS 010 AIR	Competitor 1
Ease of introduction	●●●●●	●●○○○
Viscosity 10 rpm*	9000	9000
Viscosity 20 rpm*	6600	8300
Viscosity retention after increeasing coalescing agent (BDG)	●●●●●	●●●●●
Sag resistance (200µ wet – film applicator)	●●●●●	●●●●○
Sprayability	●●●●●	●●●○○
Sag resistance (150µ wet – spraying)	●●●●○	●●●●●

**at the same dosage: 1.05% as supplied*

Viscolam PS 010 AIR in wood coatings provides:

Thickening Efficiency

Viscolam PS 010 AIR increases low shear viscosities of wood formulations effectively

Sprayability

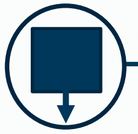
Thanks to its strongly shear thinning behavior, formulations containing Viscolam PS 010 AIR can be easily sprayed

Ease of introduction

Even being a strongly effective thickener, Viscolam PS 010 AIR is easily introduced in waterborne formulations

Sustainability

Viscolam PS 010 AIR is solvent and VOC free, and contains 23% bio-based content*



Sag resistance

Viscolam PS 010 AIR provides an extremely high sag resistance

**according to EN 16785:2*

Viscolam PS 010: Key benefits

Why use this grade?

To fix sagging issue or settling of heavy particles

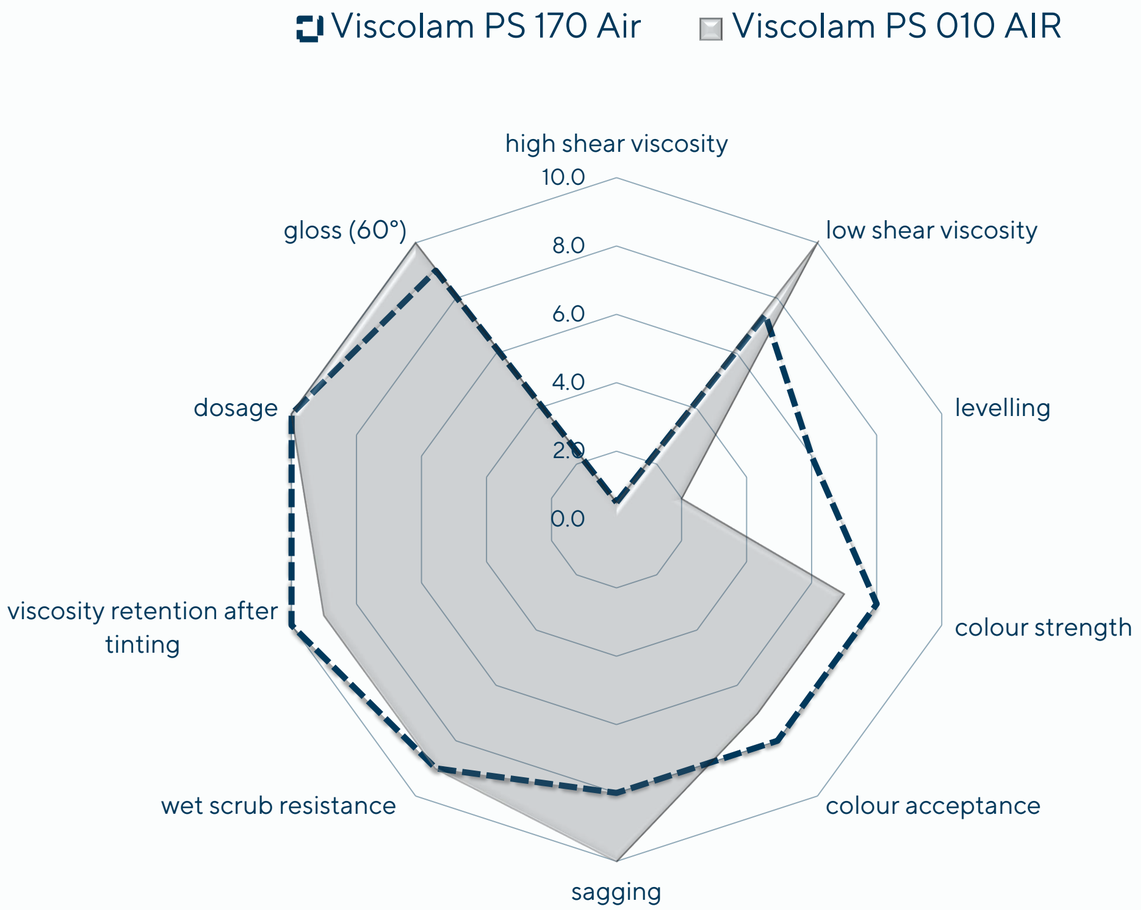
When a shear thinning behaviour along with gloss and water resistance are required

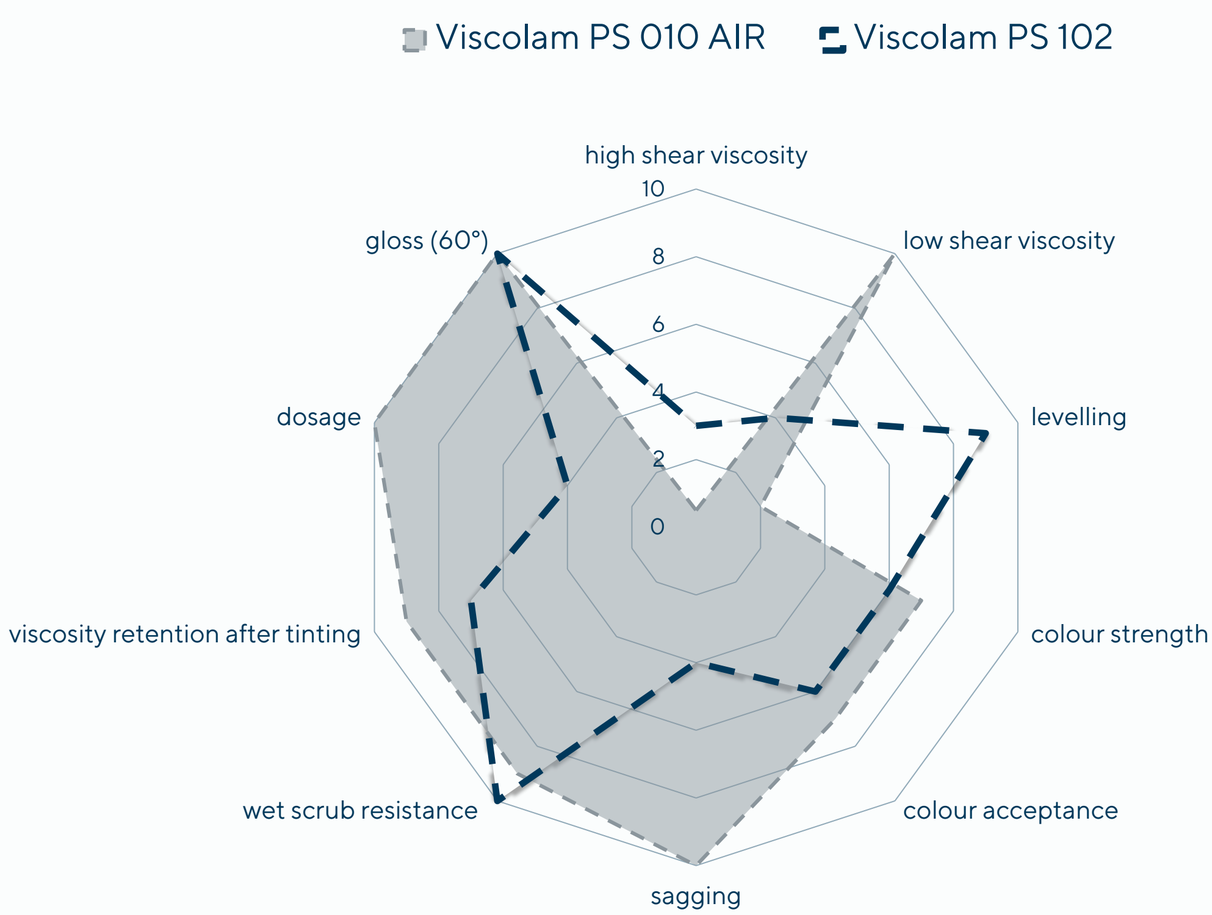
A pH independent thickener is needed

A highly efficient thickener is desired **ALONG WITH** pigment compatibility

Viscolam comparison

Low and medium-shear thickeners: comparison between different Viscolam products





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surface treatment