



VISCOLAM

Acrylic and polyurethane based rheology modifiers for the metal industry

Rheology modifiers laboratory



DISCLAIMER

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Products range & performance

Low shear thickeners

Increase stability

Prevent settling

Increase in-can viscosity effectively

Low-Medium shear thickeners

Provide in-can viscosity at low dosages

Suitable for adjusting viscosity in the latest phase of production

Offer nice balance between sag resistance and leveling

Medium-high shear thickeners

Provide effective thickening at low dosages

Reduce roller spattering

Provide smoothness and good sag resistance at once

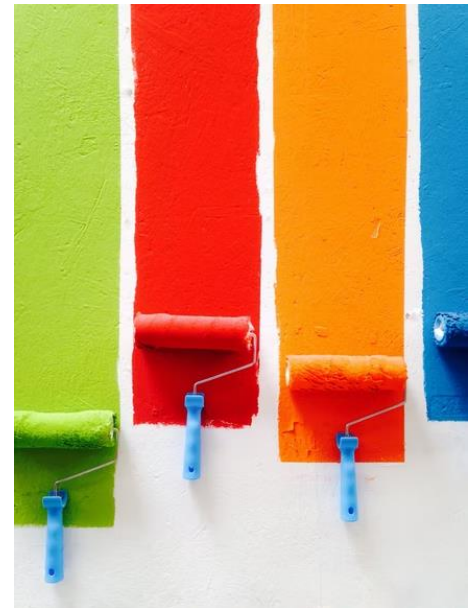
High shear thickeners

Improve gloss

Improve Smoothness

Increase thickness

Reduce roller spattering





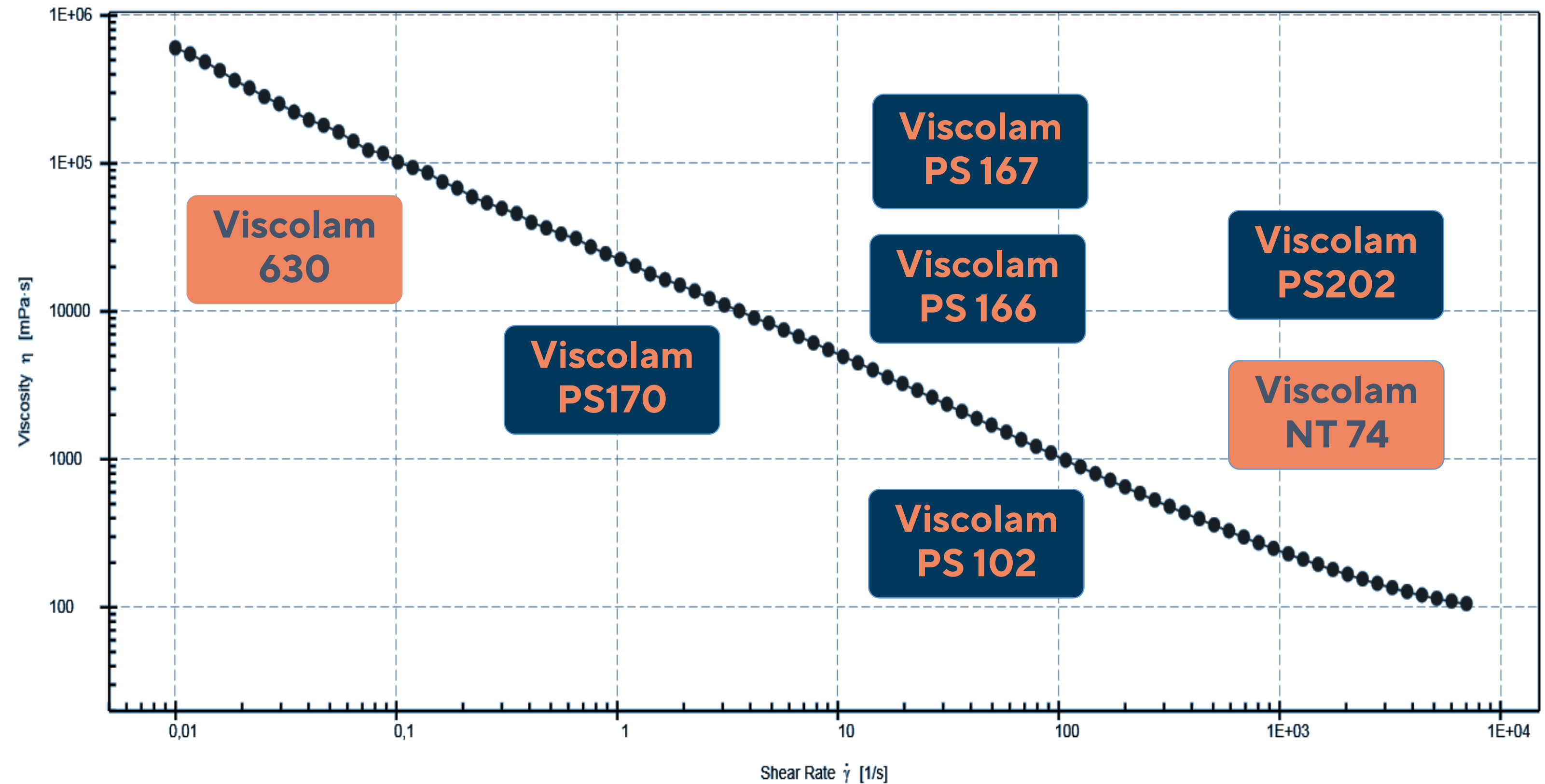
Products range & shear rates

Low shear

Low medium shear

Medium high shear

High shear (newtonian)

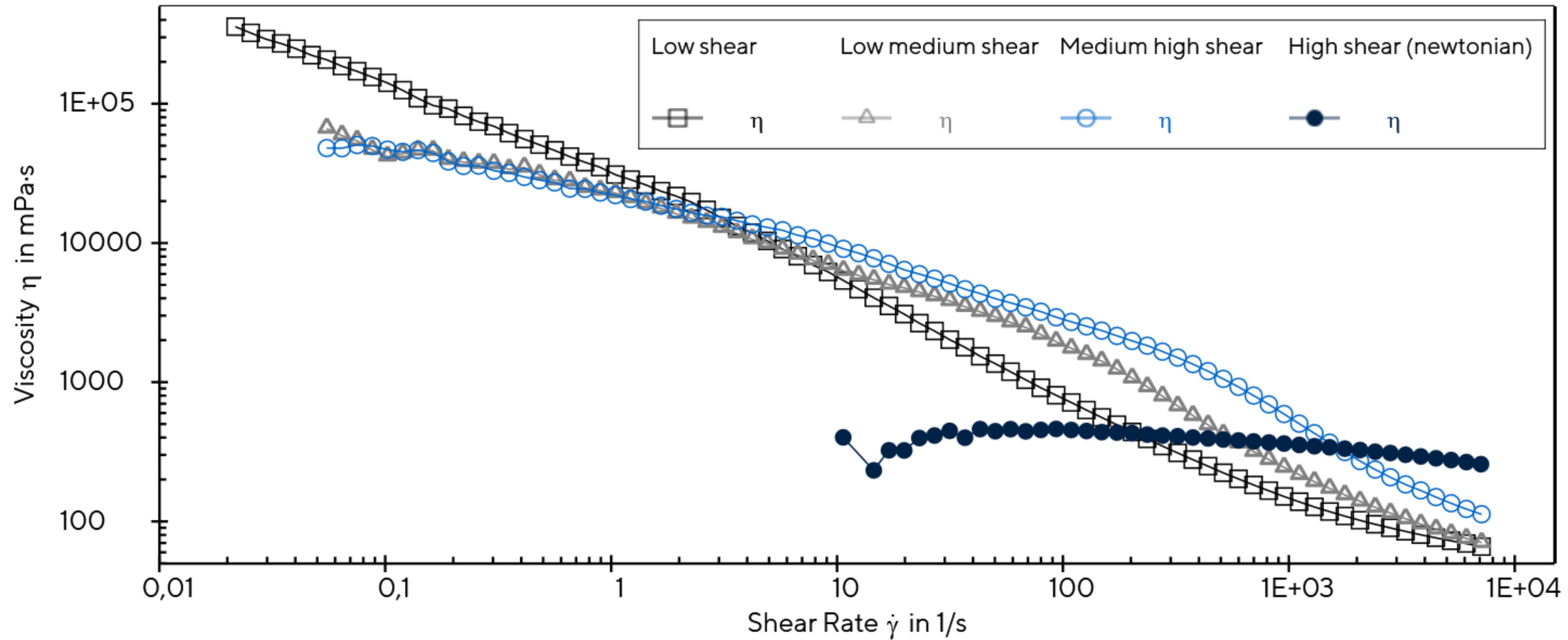


HASE

HEUR



Products range & flowing behavior



Acrylic thickeners



Viscolam 630

Chemical description

Acrylic copolymer water based emulsion (HASE)

Main use

High shear thinning thickener for waterborne paints

Typical values

Appearance at 20°C: milky liquid

pH (25°C, ASTM E70): 2.0 – 4.0

Viscosity (Brookfield RVT at 25°C, 20 rpm, spindle 5)

1000 – 4000 cPs (0,5% solution based on solid, pH 9)

Solid content: 29 – 31%

APEO free

VOC free*

*According to ISO 11890-2-2006

- Ready to use & easy to handle
- High thickening efficiency
- Excellent sag resistance
- Excellent anti-settling properties
- High brush-ability at high shear rates
- Prevent syneresis during long storage



Viscolam NT 74

Chemical description

Acrylic copolymer water based emulsion (HASE)

Main use

Rheology modifier / ICI builder

Typical values

Appearance at 20°C: opalescent liquid

pH (25°C, ASTM E70): 2.0 – 4.0

Viscosity (Brookfield RVT at 25°C, 20 rpm, spindle 5)

<2000 cPs (5%, pH 9)

Solid content: 29 – 31%

APEO free

VOC free*

*According to ISO 11890-2-2006

- Ready to use & easy to handle
- High shear thickening efficiency

Polyurethane thickeners



Viscolam PS 102

Chemical description

Hydrophobically modified water soluble ethoxylated polyurethane (HEUR)

Main use

Thickener / rheology modifier

Typical values

Appearance at 20°C: opalescent liquid

pH (25°C, ASTM E70): 5.0 – 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3)

1000 – 5000 cPs

Solid content: 24 – 26%

Co-solvent: 15% butyl carbitol

APEO free

- Ready to use & easy to handle
- High versatility
- Moderate thickening efficiency
- Good balance between leveling and sag resistance



Viscolam PS 166

Chemical description

Hydrophobically modified water soluble ethoxylated polyurethane (HEUR)

Main use

Thickener / rheology modifier

Typical values

Appearance at 20°C: opalescent yellow liquid

pH (25°C, ASTM E70): 5.0 – 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3)
<8000 cPs

Solid content: 39 – 41%

Co-solvent: 23% 2-butoxyethanol

APEO free

- Ready to use & easy to handle
- High efficiency
- Good balance between leveling and sag resistance
- Cost effective
- Suitable for glossy formulations



Viscolam PS 167

Chemical description

Hydrophobically modified water soluble ethoxylated polyurethane (HEUR)

Main use

Thickener / rheology modifier

Typical values

Appearance at 20°C: opalescent liquid

pH (25°C, ASTM E70): 5.0 – 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3)

1000 – 5000 cPs

Solid content: 24 – 26%

Co-solvent: 15% butyl carbitol

APEO free

- Ready to use & easy to handle
- High efficiency
- Good balance between leveling and sag resistance
- Cost effective
- Suitable for glossy formulations



Viscolam PS 170 AIR

Chemical description

Solvent free and VOC/SVOC free hydrophobically modified water soluble ethoxylated polyurethane (HEUR)

Main use

Thickener / rheology modifier

Typical values

Appearance at 20°C: opalescent yellow liquid

pH (25°C, ASTM E70): 4.0 – 10.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3)

<8000 cPs

Co-solvent: none

APEO free

VOC free*

*According to ISO 11890-2:2006

- 20% of biobased carbon content
- Solvent free
- VOC free
- Ready to use & easy to handle
- High thickening efficiency
- High compatibility with pigments
- Excellent rub out test performance



Viscolam PS 202

Chemical description

Hydrophobically modified water soluble ethoxylated polyurethane (HEUR)

Main use

Rheology modifier / ICI builder

Typical values

Appearance at 20°C: opalescent liquid

pH (25°C, ASTM E70): 4.0 – 7.0

Viscosity (Brookfield RVT at 25°C, 10 rpm, spindle 3)

1000 – 6000 cPs

Solid content: 19 – 21%

Co-solvent: none

- Solvent free
- VOC free
- Ready to use & easy to handle
- Highly suitable for high gloss formulations
- Provides strong film build properties
- Provides excellent flow and leveling
- Stable over a broad range of pH



Viscolam

Acrylic thickeners

High thickening efficiency
Pigment compatibility
Broad range of rheology behavior (from extremely **shear-thinning** to highly **Newtonian**)

VISCOLAM[®] ASE and HASE provide **easy handling** since their thickening mechanism is triggered by alkaline pH.

VISCOLAM[®] ASE and HASE grades are **solvent-free** and **SVOC/VOC free**.



Viscolam PS

Polyurethane thickeners

Wash-ability resistance
Outdoor resistance

Their peculiar viscoelastic behavior improves the flow-ability of waterborne formulations, making them the premium choice for high quality paints, varnishes, floor coatings and high gloss waterborne formulations.

Specific grades are **solvent-free** and **SVOC/VOC free**.

They are able to provide from **shear-thinning** to **Newtonian** rheology.

The products described in this presentation represents a selection among all available grades, based on key application properties required for DTM. For any other specific technical requirement or info please contact our sales network



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