

## RHEOLATE<sup>®</sup> PHX 7025

### Powdered Thickening Agent - Polyether Polyurethane-Based 100 % Solids Associative Rheology Modifier for Latex Paints and Other Water-Borne Systems

#### GENERAL INFORMATION

**RHEOLATE PHX 7025** is a high efficiency polyether polyurethane thickener developed for use in aqueous systems. The product is supplied as a white free-flowing powder and enables formulations of odourless paints free of organic solvent.

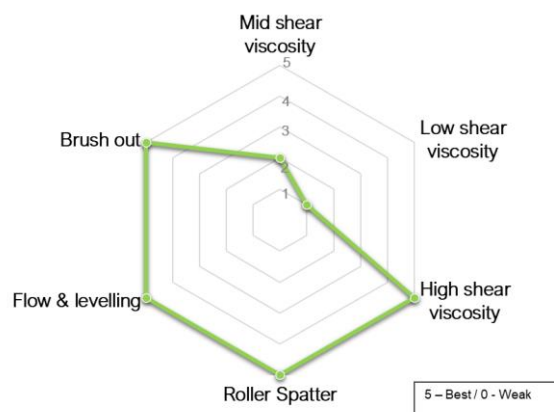
Furthermore, it is free of APEO and biocide and allow to develop sustainable solutions in coatings and adhesives. It improves values in ECO-label and other certificates. The product is suitable for anti-asthma and anti-allergy paints.

**RHEOLATE PHX 7025** has been designed for use in latex paints and other waterborne systems including inks, textile coatings, adhesives and sealants where maintaining viscosity at high shear during product application and improved film leveling is required. This high shear associative thickener offers formulators efficient ICI contribution with minimal mid-shear rheology response.

**RHEOLATE PHX 7025** can be used as a stand-alone or in combination with powder co-thickener such as RHEOLATE FX 1100 or liquid products, e.g. like RHEOLATE CVS 15 or RHEOLATE 655 if higher mid-shear (package) viscosity is required. Effective performance is achieved with latex systems of different particles sizes. The use in fine particles latex is worthy of special mention.

**RHEOLATE PHX 7025** has shown efficient high-shear viscosity development and improved flow and leveling across all sheen levels in the newer VOC-free premium as well as in conventional coatings than most other viscosity modifiers. It provides excellent stain resistance properties and applies hide to products formulated with it.

**RHEOLATE PHX 7025** provides benefits additional to those of its liquid counterpart RHEOLATE HX 6025.



#### CHEMICAL & PHYSICAL PROPERTIES

Appearance (20 °C)	white, finely divided powder
Active content (%)	99-100
Density (bulk) 20 °C [ g/cm <sup>3</sup> ] (ISO 2811-2)	0.500-0.550
Solubility	soluble in water
Composition	hydrophobic urethane polymer
Melting point ( °C )	54-57
Non-volatile content	100 %

These are typical properties not to be used for specification purposes.

#### APPLICATIONS

- Thickener for sustainable aqueous coatings / adhesives
- High quality, low VOC latex paints of all sheen levels
- High-gloss interior and exterior latex paints
- Semi-gloss interior and exterior latex paints
- Waterborne alkyd paints
- Other latex systems requiring high film build and improved flow and leveling
- Inks
- Adhesives
- Textile coatings

*continued...*

# RHEOLATE® PHX 7025

## KEY PROPERTIES

### 100 % solids powder

- APEO-, VOC-, tin-, biocide free
- contains no coalescing solvent
- offers greater manufacturing flexibility
- reduces formulation interaction
- easily stored
- non-freezing

### Excellent rheology

- Newtonian rheological profile contributing to high-shear and minimally to mid-shear
- Can be use as stand-alone thickener in formulations
- enhances film build
- gives excellent brush drag

### Compatibility

- allows broad formulating flexibility

### Labelling

- Suitable for different environmental labels like ECO-label

## INCORPORATION

**RHEOLATE PHX 7025 provide the option to be incorporated in different ways**

### Pigmented systems:

Millbase – can be added into the millbase and should be sheared under milling conditions (e.g. 14 m/s). Adequate time to be particle free will depend on PVC of the paint. With lower PVC a milling time of min 20 min. is desired.

Post addition – **RHEOLATE PHX 7025** can be used as post addition additive in the let down. A minimum speed of 8 m/s and 30 min. provide particle free incorporation in low PVC paint formulas.

Use as intermediate – Ease of incorporation into water at low stirring speed is possible and allow to manufacture solutions of 20 % to comparable the liquid versions. Higher concentrations are possible and depend on handling in manufacturing. For

longer use in production vessels it is recommended to add a biocide.

**Clearcoat systems:** Low shear incorporation will allow a homogeneous particle free distribution.

**In all cases it is recommended to run ladder studies on time / shear force upfront in the lab to determine the adequate process conditions.**

## LEVELS OF USE

Typical use levels of **RHEOLATE PHX 7025** are 0.1% to 0.6% (thickener supplied) on total system weight.

Please run a ladder test to determine the most suitable dosage before use.

## HEALTH AND SAFETY

Before using this product please consult our Safety Data Sheet (SDS) for information on safe handling and storage. The SDS can be found on the company website

## STORAGE RECOMMENDATIONS

It is recommended to store **RHEOLATE PHX 7025** in dry conditions. Although internal tests have shown that powder thickener are less sensitive storing temperature, we recommend to store preferably temperatures in the range of 4°C (40°F) to 35 °C (95°F). In the event of accidental freezing, it has to be considered that incorporation time is prolonged. Pretesting in the lab is recommended.

Store away from excessive heat or open flame. Keep container closed when not in use.

## SHELF LIFE

**RHEOLATE PHX 7025** has a shelf life of 3 (three) years from date of manufacture and when stored in unopened packaging.

## QUALITY ASSURANCE

Quality system at the site manufacturing this product complies with and is certified to ISO 9001 quality standards stipulated standards.

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