



# RHEOTECH™ 3800

Acrylic associative thickener  
for Water-based systems

**RHEOTECH™ 3800** is an associative acrylic thickener designed to improve both the rheology and the color acceptance of water based formulations.

Its outstanding effectiveness at medium shear rates allows to control very easily the perceived quality of paints during handling and to facilitate coating by roll or by brush, especially for finishing touches.

**RHEOTECH™ 3800** ensures safe additions of colorants in water based formulations, limiting viscosity changes and rub-out issues.

**RHEOTECH™ 3800** can be used in every kind of alkaline water based formulation and particularly in solvent and Alkyl Phenol Ethoxylate (APE) free formulations

## • TYPICAL ANALYSIS

**Nature:** Aqueous dispersion of an acrylic copolymer

**Appearance (20°C):** Low viscous whitish milky liquid

**Solids content (%):** 30

**Solvent:** Water

**pH (25°C):** 3

**Specific gravity (20°C):** 1.06

## • ADVANTAGES

**RHEOTECH™ 3800** is:

- Solvent free,
- Alkyl Phenol Ethoxylate (APE) free,
- Effective due to its high reactivity towards most of the solvent free and solvent containing binders,
- Liquid, low viscous and easy to handle
- Easy to use sole or in combination with every kind of thickener.
- A real alternative to the use of cellulosic ethers
- Tin free

**RHEOTECH™ 3800** provides to paints:

- Outstanding medium shear behaviour
- Outstanding behaviour towards coloring
- Improved sag/leveling compromise
- Easy finishing touches
- Good water resistance

## • APPLICATIONS

**RHEOTECH™ 3800** is an associative acrylic thickener which provides outstanding properties to water based formulations thanks to its exclusive design. It offers maximized features for most requirements: efficiency, rheology profile, ease of use, pigment compatibility, versatility, water resistance.

**RHEOTECH™ 3800** interacts both with the binder and with the water medium, thus imparting to the formulations an optimized balance between high and low shear viscosities. The unique rheological properties provided by **RHEOTECH™ 3800** ensures a successful use in medium and high PVC (pigment volume concentration) dispersion paints.

Partial or total replacement of cellulosic ethers can be envisaged e.g. in fillers, flat and semi-gloss paints with benefits in ease of use, coating properties and pigment compatibility.

One of the unique characteristics of **RHEOTECH™ 3800** is its unusual effectiveness at medium shear rates. Accurate control of the medium shear viscosity enables to improve in can appearance, especially during hand stirring: a higher medium shear viscosity offers the guarantee for a higher quality valuation of the paint. It also facilitates the handling of the paint especially during finishing touches.

High values for medium shear viscosity can also be achieved with formulations showing very low binder content, which is generally not the case with associative thickeners.

**RHEOTECH™ 3800** can therefore provide to low cost formulation rheological characteristics usually only featured with more expensive formulations: good flow, creamy appearance, drag during finishing.

**RHEOTECH™ 3800** offers advantages when surfactant and/or rest electrolytes are present or added to the formulation. That occurs e.g. as white dispersion paints are colored using pigment concentrates. Usual acrylic thickeners generally suffer from such compounds: their efficiency tends to decrease, hence the risk to face a dramatic drop of viscosity after coloration of the paint, and their stabilizing effect can be disturbed, hence appearance of pigment flooding or floating. Such issues can be solved since **RHEOTECH™ 3800** prevents viscosity drop and improves pigment compatibility.

**RHEOTECH™ 3800** should be added under stirring at the end of formulation, after the binder incorporation. The thickening effect is achieved once the pH of the formulation is brought to 8.5 to 9 using an alkali solution (sodium hydroxide, ammonium hydroxide, amines).

**RHEOTECH™ 3800** can be used alone in formulation showing high PVC, e.g. matt paints, fillers and low cost formulations, at concentration between 0.1 and 0.6% (dry on total formulation weight) typically. **RHEOTECH™ 3800** can also be used in combination with other rheology modifiers such as cellulosic ethers, Newtonian acrylic thickeners and polyurethane thickeners for an easy rheology adjustment of all kinds of water based formulations, e.g. one coat matt paints or silk paints (concentrations to use : 0.05 to 0.4%).

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## • STORAGE

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**RHEOTECH™ 3800** can be irreversibly altered by frost. It should be protected from the effects of weathering and stored between 5 and 40°C and protected from direct sun exposure. This product can be irreversibly altered by frost.

Once opened, packaging should be resealed immediately after use.

In these conditions, products should be used within 6 months after delivery.

Film-forming product. Surface may dry in contact with air.

A slight sedimentation can be visible at the bottom of drums or totes. This phenomenon is normal and has no impact on the use and level of performance as long as the solids content of the product meets the specification. If necessary, filter the product prior to its use.

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## • STANDARD PACKAGING

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- 220 l plastic drums,
- Bulk deliveries

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## • HEALTH & ENVIRONMENTAL DATA

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Please refer to the Material Safety Data Sheet.

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