



RHEOTECH™ 2000

Acrylic associative thickener
for Water-based systems

RHEOTECH™ 2000 is an alkali soluble acrylic based associative thickener specifically designed for use in aqueous systems requiring a Newtonian rheological behaviour. RHEOTECH™ 2000 is highly effective in silk and flat emulsion paints. RHEOTECH™ 2000 provides an excellent balance between high and low shear viscosities, and an excellent compatibility with most organic and inorganic pigments.

• TYPICAL ANALYSIS

Nature: Anionic aqueous dispersion of an acrylic copolymer

Appearance (20°C): Low viscosity, white milky liquid

Solids content (%): 30

pH (20°C): 3

Specific gravity (20°C): 1.06

• ADVANTAGES

RHEOTECH™ 2000 provides to paints:

- Superior film build,
- No roller spatter,
- Improved flow and levelling whilst retaining sag resistance.

RHEOTECH™ 2000 improves:

- Gloss and gloss retention,
- Compatibility with pigment dispersions,
- Resistance to bacteria attack,
- Thickening cost (ease and low level of use).

• APPLICATIONS

RHEOTECH™ 2000 gives aqueous systems very high viscosity at the high shear rates normally encountered under brush or roller application, thus imparting excellent film build whilst maintaining easy application properties. Furthermore, roller spatter is significantly reduced, levelling and at the same time sag resistance are improved. RHEOTECH™ 2000 gives excellent results with acrylic emulsion binders and good results with most other commonly used emulsion resins as well. RHEOTECH™ 2000 is compatible with most commonly used pigments, extenders and emulsion binders.

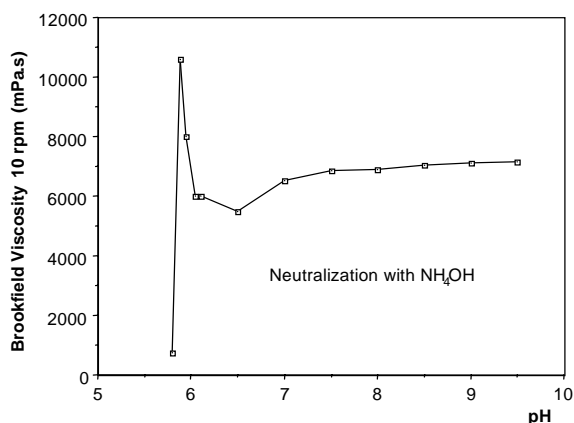
Most tinted emulsion paints thickened with RHEOTECH™ 2000 show none of the adverse effects which are often encountered with other associative thickeners (e.g.: increase in viscosity with time and flocculation of the pigments).

RHEOTECH™ 2000 provides excellent colour development, excellent stability with either organic or inorganic pigments, good gloss and gloss retention and excellent resistance to bacteria and enzymes.

RHEOTECH™ 2000 is supplied as a ready to use product, its low viscosity renders it easy to handle and to disperse.

RHEOTECH™ 2000 develops its thickening properties in neutral or alkaline medium, as shown on the following graph:

Typical Brookfield viscosity of a 10% solution of RHEOTECH™ 2000 in water as a function of pH.



The most effective and stable viscosity is obtained when the plateau part of the pH-viscosity curve is reached. The final pH of the paint should be adjusted within the range 8-9. Lower pH's can lead to flocculation and viscosity instability.

Neutralization at pH = 8.5 of 1 000 g of RHEOTECH™ 2000 requires:

- 90 g of NH₄OH 28% (specific gravity = 0.898),
- 170 g of caustic soda 30% (specific gravity = 1.33).

RHEOTECH™ 2000 can be added to an aqueous formulation in the form supplied or in a 1:1 blend of the product in water carefully neutralized to a pH of 8.5 before addition. In either case the pH of the formulation should not fall below 8. If necessary, the medium to be thickened can be pre-neutralized to a pH of 9.0 before any addition of RHEOTECH™ 2000 is made.

The exceptional thickening efficiency of RHEOTECH™ 2000 allows its use at lower addition levels whilst maintaining excellent rheological and application properties.

Since RHEOTECH™ 2000 is an associative thickener, its efficiency will depend on the chemical structure and particle size of the binder, the nature of its protective colloid and the choice of coalescing agents. However, typical use levels for RHEOTECH™ 2000 fall in the range 0.3% -1.5% by weight of active ingredient on the total formulation weight.

STORAGE

RHEOTECH™ 2000 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, packaging 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.

STANDARD PACKAGING

- 220 l plastic drums,
- 1 000 l containers,
- Bulk.

HEALTH & ENVIRONMENTAL DATA

Please refer to the Material Safety Data Sheet.

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