Devine Chemicals Ltd

DeCAL 1000

Liquid synthetic thickener for water borne systems.

DeCAL 1000 is a synthetic alkali swellable , solvent free and liquid thickener for water borne systems. It is highly effective to increase low shear viscosities as well as yield values. Levels of use can thus be significantly reduced in replacing the usual low shear effective thickeners by **DeCAL 1000**.

DeCAL 1000 is recommended for use in flat paints, textured coatings, plasters and woodstains. It is easy to handle and can be incorporated at any manufacturing step.

DeCAL 1000 is also ideally suited for use in the Industrial, Institutional and Household sectors where its high thickening power, electrolyte tolerance, surfactant stability and water white clarity on neutralisation are beneficial.

1. Typical Properties.

Appearance :	White liquid (emulsion)
pH :	3.5
Solid content :	30%
Viscosity at 25°C :	5cps (Brookfield @20 rpm)
Density at 20°C :	1.05 g cm^{-3}

2. Applications.

DeCAL 1000 is an ideal rheological control additive for water-borne coatings. Use of **DeCAL 1000** allows formulation of coatings with an advantageous thixotropic behaviour giving non stringy formulations which are easy to apply over a wide range of speeds and or processes. Such formulations are ideally suited for airless spray applications. **DeCAL 1000** is effective in the pH range optimally 7.5 – 10.5

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Since **DeCAL 1000** is a synthetically derived product it is less susceptible to microbiological attack than derivatives of cellulose. Consequently the paint formulator can substantially reduce the level of biocide leading to a broader area of application.

Rheological control additives should preferably be added at the final stage of coating manufacturing, not in the pigment grinding stage as unrecoverable damage to the thixotropic rheology can occur at high shear stress. **DeCAL 1000** is convenient to add as a post additive in liquid form thereby, offering flexibility in viscosity adjustment from batch to batch.

Provided efficient mixing equipment is available **DeCAL 1000** can be poured directly into the mix. However it is sometimes easier to add **DeCAL 1000** by diluting it 1:1 or even 1:2 with water to avoid shocking the system.

Should at any time the pH of the final system fall below 7.5 then additional alkali, ammonium or other base is necessary to reactivate the thickening mechanism. Use of volatile alkali (e.g. ammonia) as neutralising agent improves the water resistance property of the dry film. The amount of **DeCAL 1000** required for optimum performance should be determined in trials covering a concentration range.

Recommended addition level: 1.0 – 3.5% **DeCAL 1000** based on total formulation.

3. Safety & Handling.

DeCAL 1000 should be handled in accordance with good industrial practice. Detailed information is provided in the Safety Data Sheet.