

## **O58940 Claytone® APA, Thickener for Oil Paints**

Claytone® APA is a rheology additive in powder form based on an inorganophillic phyllosilicate for polar to medium-polarity systems to generate thixotropic flow behavior.

### **Product Data**

Composition: Organophillic phyllosilicate

Typical properties:

(The values indicated in this data sheet describe typical properties and do not constitute specification limits)

Bulk density: 150 – 250 kg/m<sup>3</sup>

Water content: 2 %

Specific weight: 1.7 g/cm<sup>3</sup>

Storage: Claytone® APA should be transported and stored dry in the unopened original container at temperatures between 0 and 30°C.

### **Applications**

#### **Coating Industry**

##### **Special Features and Benefits:**

Due to its special organic modification, Claytone® APA is ideally suited for influencing the flow behavior of polar to medium-polarity coating systems. Using the additive produces thixotropic flow behavior, and therefore results in significant improvements to the anti-sagging properties while at the same time maintaining good leveling. This also optimizes storage stability, and prevents pigments and fillers from settling.

##### **Recommended Use:**

Architectural coatings:	especially recommended
Industrial coatings:	especially recommended
Protection coatings:	especially recommended
Wood and furniture coatings:	especially recommended
Printing inks:	especially recommended
Powder coatings:	especially recommended

##### **Recommended Levels:**

0.3 – 2 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

**Incorporation and Processing Instructions:**

The additive is incorporated while stirring, and preferably dispersed in the mill base at high shear forces for at least 10 minutes. Alternatively, it can also be incorporated using a 10 % pregel. The effect of Claytone® APA can be increased by adding a booster or small quantities of a polar solvent or water.

**Detergents, Cleaning and Care Products**

**Special Features and Benefits:**

Claytone® APA is a rheology additive used to thicken solvent and oil systems. It is also used to stabilize water-in-oil emulsions. Claytone® APA is self-activating and easily dispersible for medium- to high-polarity systems containing compounds including aromatics, alcohols, glycols, and esters. It can also be used in liquid non-ionic surfactants (alcohol ethoxylates). Claytone® APA requires no activator for gelling.

**Recommended Use:**

Industrial cleanging agents (polar):      especially recommended  
Non-aqueous liquid detergents:            especially recommended

**Recommended Levels:**

0.5 – 3 % additive (as supplied) based upon the total formulation, depending on the properties of the formulation to be achieved.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

**Incorporation and Processing Instructions:**

To achieve optimum effectiveness, Claytone® APA should be incorporated at high shear forces. The additive is effective in a multitude of organic liquid systems and requires no specific processing temperature. Claytone® APA can be dispersed using a high-speed stirring unit. Claytone® APA can be incorporated either as a pregel or in situ.

Pregels can be produced as follows:

1. Place the organic solvent in dispersion vessel
2. Slowly add the Claytone® APA (10 % based on the pregel) while stirring
3. Stir for 15 minutes at high speed

It can be incorporated directly during the production as follows:

1. Place the organic solvent or oil in the dispersion vessel
2. Slowly add the Claytone® APA while stirring
3. Stir for 15 minutes at high speed
4. Continue to add the other formulation components

When post-adding to the finished system, ensure that Claytone® APA is well dispersed. Adding to a hot base can cause a very rapid external wetting of the powder. These wetted particles with a “dry” core are very difficult to disperse completely. Claytone® APA should therefore be used in system at a temperature below 50°C. The use of a high-speed mixer or a low shear dissolver is required for a later dispersion. Surfactants and emulsifying agents may be added only after Claytone® APA has been activated, otherwise the effect of the additive could be reduced or completely eliminated. When using emulsions, Claytone® APA should be incorporated into the oil phase.

**Kremer Pigments recommendation:**

5 g (#58940) Claytone® APA mixed with 35 ml (#70010) Pine Turpentine can be thickened with 8 ml (#70800) Ethyl Alcohol into a gel.

As an alternative to Pine Turpentine, (#70460) Shellsol® T can be used, but the paste will remain slightly more fluid and softer.

Grinding Claytone® APA with pigment and subsequent thickening with alcohol is not recommended.