

# GARAMITE-7303

Powdered rheology additive for non-polar to medium-polar solvent-borne and solvent-free systems to increase the storage stability and sag resistance.

## Product Data

### Composition

Organophilic phyllosilicates

### Typical Properties

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

Bulk density: ca. 120 kg/m<sup>3</sup>

Water content: < 6 %

Specific weight: 1.5-1.7 g/cm<sup>3</sup>

### Food Contact Legal Status

For the current food contact legal status, please contact our product safety department or visit [www.byk.com](http://www.byk.com) for further information.

### Storage and Transportation

To be stored and transported at a temperature below 40 °C.

## Applications

### Coatings Industry

#### Special Features and Benefits

GARAMITE-7303 is a rheology additive that offers benefits over conventional organophilic phyllosilicates (organoclays). Conventional phyllosilicates typically require incorporation at high shear forces and polar activators to support dispersion. In contrast, GARAMITE-7303 can be easily incorporated and activated in solvents and binders under moderate shear force. The additive has a highly pseudoplastic viscosity profile. GARAMITE-7303 makes it possible to produce formulations with high viscosity in the low shear range, which results in outstanding anti-settling and anti-syneresis properties. Applying shear force causes a strong reduction in viscosity which significantly improves the application properties.

#### Recommended Use

GARAMITE-7303 is ideally suited to non-polar and medium-polar systems in the following applications:

Architectural coatings	<input checked="" type="checkbox"/>
Protective coatings	<input checked="" type="checkbox"/>
Industrial coatings	<input type="checkbox"/>

☒ especially recommended    ☐ recommended

### **Recommended Levels**

0.5-2% additive (as supplied) based upon 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 can be incorporated in different ways. Either disperse GARAMITE-7303 directly in the millbase or add it as a 10-15% paste in solvent to the millbase or letdown. The additive should be incorporated into the solvent at sufficient shear force. When adding during the milling process, we recommend pre-dispersing in the binder and solvent at moderate shear force before adding the pigments and fillers.

The effect of GARAMITE-7303 can be further increased by adding a booster or small quantities of a polar solvent or water.

## **PVC Plastisols**

### **Special Features and Benefits**

GARAMITE-7303 is a powdered rheology additive based on a composition of organically modified phyllosilicates. It is particularly suited to formulating PVC plastisols. The combination of a variety of morphological structures increases the particle spacing and makes dispersion in the liquid phase particularly easy.

The use of GARAMITE-7303 offers the following benefits:

- Pseudoplastic flow
- No impact on the VOC content
- Easy to incorporate
- Broad compatibility with various plasticizers
- Greater effectiveness than precipitated fillers

### **Recommended Levels**

1-5 % additive (as supplied) based upon 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**

GARAMITE-7303 can be directly incorporated into the liquid phase or post-added under moderate shear force. We recommend checking the influence of the product on haze, hue and thermal stability in a series of laboratory tests.

## Detergents, Cleaning and Care Products

### Special Features and Benefits

GARAMITE-7303 is a powdered rheology additive for use in low to medium-polar solvent systems that contain mineral oils, isoparaffin, white spirits, silicone oils or aromatic solvents. GARAMITE-7303 can be dispersed very easily and can even be processed at low shear forces. It does not require an activator to reach full effectiveness. GARAMITE-1958 produces outstanding sag resistance and effectively prevents settling and syneresis.

### Recommended Use

GARAMITE-7303 is suitable for a wide range of solvent-borne systems, especially:

Industrial cleaning agents (non-polar)	<input checked="" type="checkbox"/>
Non-aqueous liquid detergents	<input type="checkbox"/>

☒ especially recommended    ☐ 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

GARAMITE-7303 can either be incorporated as a paste or in situ.

Pastes can be produced in the following way:

1. Place the organic solvent in the dispersion vessel
2. Gradually add GARAMITE-7303 (up to 20%, based on the paste) whilst stirring
3. Mix for 15 minutes whilst stirring

The additive can be directly incorporated during manufacture as follows:

1. Place the organic solvent or oil in the dispersion vessel
2. Gradually add GARAMITE-7303 whilst stirring
3. Mix for 15 minutes whilst stirring
4. Continue adding the other formulation components

It is also possible to post-add GARAMITE-7303 to a finished system. This requires higher shear forces and the batch temperature needs to be below 50 °C.

## Adhesives and Sealants

### Special Features and Benefits

GARAMITE-7303 is a powdered rheology additive for use in adhesives and sealants, and contributes to improving sagging whilst enabling easy processing. The additive is characterized by particularly easy incorporation with a high efficiency in various binder systems based on polyurethanes, epoxides and silane-terminated polymers.

GARAMITE-7303 offers the following benefits compared with conventional rheology additives:

- Higher sagging stability
- High shear thinning effect
- Very easy incorporation
- Tolerant to high shear forces
- No heat or activators are needed for activation
- Greater bulk density than fumed silica, making it easier to use with significantly reduced dusting
- Greater efficiency and/or lower dosage

### Recommended Levels

0.5-5 % additive (as supplied) based upon 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

GARAMITE-7303 can be incorporated directly into the formulation. It is important that for one-component moisture-curing systems GARAMITE-7303 is either pre-dried or dried using chemical water scavengers. In both cases, drying can be performed in combination with standard fillers such as  $\text{CaCO}_3$ .



Additive Guide



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