

CRAYVALLAC PA4 WDA 12



TECHNICAL DATA

SALES SPECIFICATION

Non-volatile content, % @ 150°C (302°F)
(CR 011) 12 ± 1

OTHER PROPERTIES

Volatile D60 and Alcohol

Density at 25°C (77°F), g/cm³
(CR 006) 0.88

Appearance Off white paste

PRODUCT INFORMATION

Crayvallac PA4 WDA 12 is a pre-activated amide wax dispersed in a mixture of mineral spirit (D60) and alcohols. It is a rheology modifier in paste form for post-addition to solvent-based coatings with low polarity systems. The use of **CRAYVALLAC PA4 WDA 12** provides a very simple and direct means of introducing shear-thinning rheology with thixotropic viscosity recovery to coating formulations. **CRAYVALLAC PA4 WDA 12** is a softer version to CRAYVALLAC PA3 WDA 20, with an enhanced easiness for incorporation.

The performance benefits of **CRAYVALLAC PA4 WDA 12** are:

- Suitable for post-addition
- Easy to incorporate
- Imparts shear-thinning rheology with thixotropic viscosity recovery
- Very good sag resistance
- Very good anti-settle properties
- Good recoatability

In addition to these excellent performance benefits, **CRAYVALLAC PA4 WDA 12** is also a very cost efficient alternative to organoclays.

RECOMMENDED AMOUNTS

Anti-Settling 1.0 - 3.0%
Sag Resistance 3.0 - 5.0%

INCORPORATION METHODS AND PROCESSING INSTRUCTIONS

CRAYVALLAC PA4 WDA 12 is a pre-activated amide paste and exists in the form of crystalline fibres. In a coating system, these fibres form an interacting network. It is this fibrous network that gives rise to the shear-thinning rheology of the final coating.

This shear-thinning characteristic provides a very high viscosity under the low shear rates associated with sedimentation, and a low viscosity at the much higher application shear rates. The net result is excellent control of sedimentation combined with ease of application.

Immediately following application, where low shear conditions again predominate, the coating's viscosity undergoes a time dependent recovery as the network re-establishes itself. This time dependence is known as thixotropy and enables the final coating to attain very good levelling.

In order to obtain maximum efficiency from **CRAYVALLAC PA4 WDA 12**, it is necessary to disperse this product without destroying the crystalline fibres. It is therefore preferable to incorporate **CRAYVALLAC PA4 WDA 12** under low to medium shear conditions over as short a time period as possible.

There are two main methods by which **CRAYVALLAC PA4 WDA 12** can be incorporated:

Post addition:

When using a high-speed disperser, **CRAYVALLAC PA4 WDA 12** is added during the final stages of production, when the coating has

been partially thinned to a viscosity of 600-800mPas (ICI cone and plate at 10000s-1) and the peripheral speed reduced to approximately 4ms-1. Too high a speed will result in destruction of the active fibres and reduced performance, whereas, too low a speed will result in extended incorporation times. In general, the time required for incorporation should be kept to a minimum in order to minimise damage due to overshear.

Master batch preparation:

A master batch can be prepared by dispersing **CRAYVALLAC PA4 WDA 12** in a resin and/or solvent using low to medium shear rates. This dispersion can then be added to the finished coating.

Due to the multitude of formulations, processing methods and application conditions used in the field, we strongly recommend that all products containing **CRAYVALLAC PA4 WDA 12** be tested thoroughly to ensure suitability for their intended end use. In particular, the suitability of this product for application by hot-spray, or curing in poorly ventilated areas may require additional validation.

PRECAUTION FOR STORAGE

CRAYVALLAC PA4 WDA 12 should be stored in the original containers in a dry place at temperatures between 5°C (41°F) and 30°C (86°F). Avoid exposure to direct sunlight or frost. Under these conditions the product may be stored for up to 24 months from production date.

PRECAUTION FOR USE

Please refer to the corresponding Safety Data Sheet.

The information contained in this document is based on trials carried out by our technical centres and data selected from literature, but shall in no event be held to constitute or imply any warranty, undertaking, expressed or implied commitment from our part. Our formal specifications define the limit of our commitment. No liability whatsoever can be accepted by ARKEMA with regard to the handling, processing or use of the product or products concerned which must in all cases be employed in accordance with all relevant laws and/or regulations in force in the country or countries concerned.



The world is our inspiration

Arkema
420 rue D'Estienne d'Orves
92705 Colombes Cedex - France
www.arkema.com

www.crayvallac.com