CRAYVALLAC® PA3 X 20

Pre-Activated Amide Paste

Product Benefits

CRAYVALLAC® PA3 X 20 is a pre-activated amide wax dispersed in a mixture of xylene and alcohols. It is a rheology modifier in paste form for post-addition to solvent-based industrial coatings and industrial wood finishes. The use of CRAYVALLAC® PA3 X 20 provides a very simple and direct means of introducing shear-thinning rheology with thixotropic viscosity recovery to coating formulations.

Solvent-based industrial coatings:

CRAYVALLAC® PA3 X 20 is particularly recommended for clear varnishes and topcoats where a high gloss is important.

- 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

Industrial wood finishes:

CRAYVALLAC® PA3 X 20 can be used in a variety of industrial wood finishes e.g. polyurethane (alkyd or acrylic based), nitrocellulose and acid curing. It is particularly suited to applications where strong anti-sag and anti-settle properties are required e.g. sealers. The performance benefits of this product in industrial wood finishes are:

- Post-addition rheology modifier
- Suitable for higher build coatings
- No pre-gel preparation required
- Imparts shear-thinning rheology with thixotropic viscosity recovery
- Excellent pigment and filler suspension during storage
- Coating formulations that are easy to apply yet exhibit excellent sag resistance combined with very good flow and levelling
- Prevention of excessive substrate penetration with clear sealers and consequently improvement of filling power and coverage

In addition to these excellent performance benefits, CRAYVALLAC® PA3 X 20 is also a very cost efficient alternative to organoclays.

CRAYVALLAC® PA3 X 20 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.

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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® PA3 X 20, it is necessary to disperse this product without destroying the crystalline fibres. It is therefore preferable to incorporate CRAYVALLAC® PA3 X 20 under low to medium shear conditions over as short a time period as possible.

There are two main methods by which CRAYVALLAC® PA3 X 20 can be incorporated:

Post addition:

When using a high-speed disperser, CRAYVALLAC® PA3 X 20 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® PA3 X 20 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® PA3 X 20 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. We do not recommend CRAYVALLAC® PA3 X 20 for forced cure and stoving applications.

Sales Specifications

Non-volatile content, % @ 150°C (302°F) (CR011)	20 ± 1

Other Properties

Volatile	Xylene and Alcohol
Density at 25°C (77°F), g/cm³ (CR 006)	0.88
Appearance	Off white paste

Recommendations for Use

Anti-Settling	0.5 - 2.0%
Sag Resistance	2.0 - 5.0%

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Product Safety

Before handling the materials listed in this bulletin, read and understand the product MSDS (Material Safety Data Sheet) for additional information on personal protective equipment and for safety, health and environmental information. For environmental, safety and toxicological information, contact our Customer Service Department at 1-866-837-5532 to find an MSDS, or visit our web site: www.arkemacoatingresins.com

No chemical should be used as or in a food, drug, medical device, or cosmetic, or in a product or process in which it may contact a food, drug, medical device, or cosmetic until the user has determined the suitability and legality of the use. Since government regulations and use conditions are subject to change, it is the user's responsibility to determine that this information is appropriate and suitable under current, applicable laws and regulations.

Arkema Coating Resins requests that the customer read, understand, and comply with the information contained in this publication and the current MSDS(s). The customer should furnish the information in this publication to its employees, contractors, and customers, or any other users of the product(s), and request that they do the same.

Storage and Handling

Follow procedures typically recommended for polymer dispersions. Use corrosion-resistant storage tanks and piping. Air-operated diaphragm pumps are preferred. Avoid temperature extremes. Do not freeze; store between 5°- 30°C. Under these conditions the product may be stored for up to 24 months from production date.

ARKEMA
INNOVATIVE CHEMISTRY

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