

# Product Information

## Acronal® AA 611 ap

### Aqueous polymer dispersion for the manufacture of high quality exterior architectural paints

Acronal® AA611 ap is an aqueous polymer dispersion for the manufacture of high quality exterior architectural paints with excellent TiO2 utilization, superior adhesion performance and high dirt pickup resistance.

#### Chemical Nature:

Aqueous acrylic/methacrylic copolymer dispersion

#### Benefits

- High adhesion to timber, metal and masonry
- High dirt resistance
- Can be used for primerless paint systems
- UV durable

#### Features

- Pure acrylic
- Wet adhesion modified
- Tg suitable for timber substrates
- Crosslinked for high dirt resistance
- APEO surfactant free

#### Properties

Product specification*	Solids content	%	50 ± 1
	pH value	pH	7.0 – 9.0
	Viscosity at 23 °C, Spindle 2 / 40 rpm (DIN EN ISO 2555)	mPa s	1000 – 3000
Other properties of dispersions	Minimum film-forming temperature (ISO 2115)	°C	approx. 14
	Density (ISO 2811-1)	g/cm <sup>3</sup>	approx. 1.06
	Resistance to frost	°C	≤ 0
	Type of dispersion		anionic

\*The aforementioned data shall constitute the agreed contractual quality of the product at the time of passing of risk. The data are controlled at regular intervals as part of our quality assurance program. Neither these data nor the properties of product specimens shall imply any legally binding guarantee of certain properties or of fitness for a specific purpose. No liability of ours can be derived therefrom.

#### Note

The information submitted in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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## Applications

### Areas of application

The main field of application for Acronal® AA611 ap is as a binder for all types of interior and exterior paints, including direct to substrate versions, particularly high-gloss to satin and low sheen paints and wood coatings. The surface of the film undergoes crosslinking when it is exposed to UV light or sunlight, which reduces surface tack. The result is paint films with significantly lower dirt pick up compared to standard acrylic polymers. Acronal® AA611 ap is also suitable for architectural satin finishes with PVC's of about 40%, transparent coatings, high PVC (>60%) paints for primed surfaces, colored aggregate finishes and fine textured finishes. The adhesion modification system in Acronal® AA611 ap provides excellent adhesion to a variety of substrates, including aged alkyd paints and mortar substrates.

### Processing

Products formulated with Acronal® AA611 ap can be made up in the usual manner with a high speed mixer. Sokalan® CP 9 is recommended for dispersing titanium dioxide pigments in propylene glycol or propylene glycol/water. Sokalan® PA polyacrylate types can be used as a codispersant or sodium / potassium polyphosphates may also be included in the dispersant phase.

Associative thickeners, e. g. Collacral® LR 8990, PU 70 or PU 80, are particularly suitable for adjusting the viscosity and flow, because they do not give rise to a yield point in the rheological characteristic. These thickeners may be combined with hydroxyethyl cellulose or modified cellulose thickeners in order to reduce any tendency of sagging and to prevent pigment flocculation.

Like all dispersions Acronal® AA611 ap tends to foam, therefore in formulations, a defoamer is usually required. The usual types on the market can be recommended in proportions of 0.2 - 1%, but their suitability should be tested first.

A coalescent is required to ensure satisfactory film formation. Water miscible glycol ethers are particularly suitable for this purpose. Examples of other suitable coalescents are Solvenon® TpNB and Lusolvan FBH. Generally 4% wet on wet dispersion is required to ensure the film coalesces at 5 °C.

Propylene glycol or butyldiglycol are suitable for increasing the wet edge time but temporarily impair the resistance to blocking and increase the sensitivity to water.

Preservatives should be added to products made up from Acronal® AA611 ap, in order to ensure adequate protection against microbial attack during long storage periods. Their compatibility and effectiveness however should be tested also. Paints manufactured using Acronal® AA611 ap display good adhesion to a variety of surfaces. Tinting and color can be achieved using standard pigments used in Architectural coatings, including BASF's range of Xfast® easy disperse pigment powders and Luconyl® pigment pastes. In all cases the compatibility with and effects on the performance of the coatings should be thoroughly checked. Zinc Oxide can improve tannin blocking and act as an in film preservative.

Paints formulated without non ionic surfactants and using Acronal® AA611 ap will still display good tinter acceptance. This is due to the surfactants used in the Acronal® AA611 ap. Removal of the non ionic surfactants from standard formulations will decrease the water sensitivity of the paint and should only be added in if tests show them to be required (e.g. poor tinter acceptance).

Manufacturers must perform their own careful tests in developing products containing Acronal® AA611 ap, because tests on our part cannot embrace the great variety of factors that may influence results during manufacture and application, e. g. the mutual compatibility of the ingredients, the mixing mechanisms, and the adhesion to various substrates. Testing should include storage at ca. 50°C in order to ensure that the viscosity remains stable at this temperature.

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## Safety

### General

The usual precautions for handling chemicals must be observed. These include the measures set out in the guidelines of the organizations responsible for safety at work, in particular, good ventilation and fume extraction at the workplace, care of the skin and the wearing of eye protection.

### Safety Data Sheet

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Due attention should also be given to the **precautions** necessary for handling chemicals.

### Labelling

According to all the data at our disposal, Acronal® AA611 ap does not need to be labelled as a dangerous substance or preparation as defined in the relevant local directives according to their current status.

## Storage

Acronal® AA611 ap must not be allowed to come into contact with metals or alloys that are susceptible to corrosion. It is very important to ensure that containers are kept tightly closed or that the airspace in storage tanks is kept saturated with water vapor. Exposure to frost or sources of intense heat must be avoided.

Acronal® AA611 ap contains sufficient preservative for transportation. More preservative must be added during subsequent storage to protect the material against microbial attack. Tank hygiene measures must also be adopted (cf. our Technical Information Bulletin "Storage tanks for polymer dispersions").

Acronal® AA611 ap has a shelf life of approximately 9 months at temperatures between 10°C to 30°C.

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