



# Product Information

## Acronal® 7646

### Aqueous polymer dispersion for use in matt clear coatings

Acronal® 7646 is a finely divided polymer dispersion with a medium viscosity which is designed for matt clear topcoat. It forms films that are matt, high transparency and tack-free at temperatures of 25-30°C. Films formed by Acronal®7646 have high water resistance and high light fastness, and they are very resistant to saponification and weathering. They have very little tendency to blush, even if they are exposed to water for long periods.

**Chemical Nature:**  
 Aqueous dispersion of a copolymer of acrylic and methacrylic acid esters

**Benefits**

- Designed for matt clear topcoat
- Excellent exterior durability
- Outstanding blushing resistance
- Tough, flexible and tack-free

**Features**

- Excellent balance of matt finish and transparency
- Good dirt pickup resistance
- Very good weatherability
- Very good water whitening resistance
- Resistant to saponification
- APEO-free

Properties			
Product specification*	Solids content	%	28 ± 1
	pH value	pH	7.5 – 9.5
	Viscosity at 23 °C, RVT Sp5/20rpm (DIN EN ISO 2555)	mPa s	6000 – 9000
Other properties of dispersions	Minimum film-forming temperature (ISO 2115)	°C	approx. 25
	Density (ISO 2811-1)	g/cm³	approx. 1.04
	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.

## Applications

### Areas of application

Acronal®7646 is mainly used as a binder for matt clear topcoat with excellent blushing resistance.

### Processing

It is advisable to disperse the pigments and extenders with wetting and dispersing agents such as Dispex® CX4320 and water-soluble polyphosphates in an alkaline medium in advance before the polymer dispersion is added. It is only when products with very high viscosity are being mixed in low-speed mixers that Acronal® 7646 should be added together with the wetting and dispersing agents.

Acronal® 7646 has very good compatibility with pigments, fillers and colored stones.

Various thickeners can be added to emulsion paints in order to adjust their viscosity and workability. Diurethane thickeners (such as, Rheovis® PU1331, HS1152) and bentonite can be used. The choice of thickener depends on whether the coating is expected to be free-flowing or more thixotropic.

Solvents need to be added in order to enable the polymer to form a uniform film at temperatures below ambient temperature. e.g. Loxanol® CA 5330 or CA 5308. It is usually sufficient to add these solvents at a level of 5-10%, expressed as a proportion of the total dispersion. Short-chain alcohol and glycols improve the freeze-thaw resistance of paints, but they cannot be used to lower the film-forming temperature. If possible, solvents should not be added direct to the polymer dispersion, they should be mixed with the pigment paste and then added.

Acronal®7646, like all fine dispersions, has a tendency to foam. It is therefore necessary to add a commercial defoamer at the level of 0.3~1%. e.g. FoamStar® ED2522 or FoamStar® ST2410. Trials should be carried out to test the effectiveness of the defoamer.

Acronal®7646 is protected against attack by microorganisms, preservatives must still be added to the formulated products so as to ensure uniform quality even with prolonged storage. Compatibility and effectiveness must be determined by preliminary trials.

Customers have to carry out their own trials when developing and processing products based on Acronal®7646. The compatibility of Acronal®7646 with other ingredients of formulations, its effect on mixing process and its adhesion on different substrates etc., are affected by a variety of factors which are too numerous for us to take in to account in our own trials. This includes testing its stability by storing it at ca. 50°C to confirm that its viscosity remains stable.

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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.

### Labeling

According to all the data at our disposal, Acronal® 7646 does not need to be labeled as a dangerous substance or preparation as defined in the relevant local directives according to their current status.

## Storage

Acronal® 7646 must not be allowed to come into contact during storage with metals or alloys that are susceptible to corrosion. It is important to ensure that containers are kept tightly sealed, and the headspace of bulk storage tanks must be kept saturated with water vapor. This product must not be exposed to high temperatures, and it must be protected from frost.

Acronal® 7646 has a shelf life of nine months at 10 – 30 ° C, provided due attention is paid to the hygiene of tanks and storage facilities.

We would recommend treating this product with a biocide in order to prevent problems with micro organisms from occurring during storage and processing.

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