Product Information

Acronal® ECO 559 ap

Polymer dispersion for low environmental impact zero-low VOCs low odor architectural coatings

Acronal® ECO 559 ap contains finely dispersed particles and has a low viscosity. It is odorless and contains no ammonia, solvents or plasticizers. It exhibits excellent compatibility with commonly used pigments and extenders and doesn't require coalescing agent in formulation. Films obtained from it are clear, flexible and glossy, and very resistant to water and hydrolysis.

Chemical Nature:

Polymer dispersion of acrylic ester and styrene

Benefits

- Earlier reoccupation of painted space
- Lower formulated cost
- Meets or exceeds VOC regulations for Premium Ultra Low VOC Flexible Paints

Features

- Odorless polymer dispersion
- No need of coalescing agent
- APEO free
- Outstanding water and alkali resistance

Properties			
Product specification*	Solids content	%	50 ± 1
	pH value	pH	6.0 – 7.5
	Viscosity at 23 °C, shear rate 100^{-1} (DIN EN ISO 2555)	mPa·s	160 – 1000
Other properties of dispersions	Minimum film-forming temperature (ISO 2115)	°C	approx. 3
	Density (ISO 2811-1)	g/cm^3	approx. 1.04
	Resistance to frost	ºC	≤ 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.

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Applications

Areas of application

Acronal® ECO 559 ap is ideal for zero-low VOC and odorless paints. Its high pigment binding capacity makes it suitable for use in emulsion paints, smoothing fillers and textured finishes. Due to its high alkali resistance and compatibility with common potassium water glasses, Acronal® ECO 559 ap can also be utilized in silicate-based finishes.

Processing

It is advisable to disperse the pigments and extenders with wetting and dispersing agents such as sodium polyacrylates or sodium polyphosphates, which are particularly appropriate for use as dispersing agents in low-odor coatings. It is only when products with very high viscosity are being mixed in low-speed mixers that Acronal® ECO 559 ap should be added together with the wetting and dispersing agents.

The nature and quantity of the pigments and fillers can be varied within wide limits. This primarily depends on the application for which the coating is intended, i. e. interior or exterior, factors such as the required gloss, flexibility and wet abrasion resistance, the type of substrate and the amount of binder required to disperse the pigments and fillers (i.e. their oil absorption).

Various thickeners can be added to emulsion paints in order to adjust their viscosity and workability. Cellulose ethers, polyacrylates, diurethane thickener (such as Rheovis® AS 1125) and bentonite can be used. The choice of thickener depends on whether the coating is expected to be free-flowing or more thixotropic.

No solvents need to be added to highly pigmented interior paints and silicate paints formulated with Acronal® ECO 559 ap to promote film formation.

Like all finely divided polymer dispersion, Acronal® ECO 559 ap has a tendency to foam. It is therefore necessary to add a commercial defoamer at the level recommended by the manufacturer. Trials should be carried out to test the effectiveness of the defoamer.

Although Acronal® ECO 559 ap itself is resistant to microorganisms in the form in which it is supplied, preservatives need to be added to products formulated with Acronal® ECO 559 ap to protect them from attack by microorganisms over long periods in storage. Trials should always be carried out to test the compatibility and efficacy of the preservatives.

Customers have to carry out their own trials when developing and processing products based on Acronal® ECO 559 ap. The compatibility of Acronal® ECO 559 ap with other ingredients of formulations, its effect on mixing processes and its adhesion on different substrates etc., are affected by a variety of factors which are too numerous for us to take into 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 organisations 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® ECO 559 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® ECO 559 ap 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® ECO 559 ap 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.

Contact Us

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