

# Acronal® 4400

## Chemical Nature

Acrylic Dispersion for Enhanced-Performance Elastomeric Roof Coatings.

### Properties

#### Typical Properties

Solids content	%	54.0 – 56.0
Viscosity at 25°C (Brookfield RV, Spindle #2, at 100 rpm)	mPa s	ca. 200
pH value		7.5 – 8.5

#### Other properties

Density	lbs/gal	8.6
Dispersion type		anionic
Sensitivity to freezing		Protect from freezing

#### Key Features

Acronal 4400 is an all-acrylic aqueous polymer dispersion designed primarily for zinc oxide-free formulations. It is optimized to offer a broad spectrum of enhanced performance benefits, such as improved adhesion across a wide range of roofing substrates, improved asphalt-bleed resistance, retention of film elasticity after weathering, and higher solar reflectivity due to enhanced dirt pick-up resistance. Further, Acronal 4400 - when combined with BASF's Quick-Trigger 4333 additive - delivers early rain resistance under even the most challenging weather conditions. Acronal 4400 was value engineered to provide environmental benefits in zinc-free roof coating formulations and comply with the performance parameters of ASTM D 6083 & California Title 24 protocols.

\* These typical values should not be interpreted as specifications.

### Application

#### Fields of application

While traditional elastomeric acrylic roof coatings fulfill many of the desired properties for roof coatings, they typically limit the formulator to rely on conventional formulation approaches involving very high amounts of zinc oxide for mechanical properties, and thereby limiting the versatility of the formulation across a broad range of roofing substrates. Traditional elastomeric roof coatings also show poor asphalt bleed resistance and are very vulnerable to early rainfall, resulting in delamination or surface defects, all of which prematurely shorten the life of the roof coating. Thus, traditional elastomeric roof coatings lack the breadth of performance features required to meet the rigorous demands required for exterior coatings. Roof coatings formulated with Acronal 4400 do not require the presence of zinc oxide to achieve robust mechanical properties; thus, they offer enhanced performance attributes such as improved adhesion across a broad range of roofing substrates while retaining the elasticity of the coating, even after considerable weathering. Traditional roof coatings lose a substantial portion of their elasticity after only 1000 hours of accelerated weathering, which makes them vulnerable to surface coating defects that shorten the life of the coating.

Acronal 4400 polymer is designed via a unique selection and combination of key monomers, along with an innovative self-cross-linking chemistry, to allow the formulator to achieve durable, enhanced-performance coatings, under even the most challenging weather conditions.

High performance roof coatings with Acronal 4400 can be designed to have the following features:

- A balance of excellent tensile and elongation properties in the absence of zinc oxide
- Excellent retention of film elasticity upon extended weathering
- Excellent durability
- High solar reflectivity for reduced roof temperatures and energy efficiency
- Enhanced asphalt bleed resistance relative to conventional elastomeric polymers
- Enhanced adhesion to many roofing substrates
- Enhanced dirt pick-up resistance
- Excellent low-temperature flexibility
- Compatible with BASF's Quick-Trigger® Technology to achieve Early Rain Resistance
- APEO & Zinc Free

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## Safety

### General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

### Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Acronal 4400.

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## Storage

Please refer to the "Handling and Storage of Polymer Dispersions" brochure.

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