

# Acronal<sup>®</sup> 4888

Polymer dispersion used to bond nonwoven fabrics

## Chemical Nature

Aqueous dispersions of a heat crosslinking copolymer of acrylic esters and styrene, manufactured by a process incorporating acrylonitrile.

## Properties

### Typical Properties

Solids content	%	~ 50.0
pH value		~ 7.5
Viscosity at 23 °C (Brookfield RV, Spindle #2, at 20 rpm)	cps	~ 60 - 1000

### Further properties of the dispersion

Density	g/cm <sup>3</sup>	approx. 1.05
Freeze/thaw stability		not stable
Dispersion type		anionic

### Properties of the film

Glass transition temperature T <sub>g</sub> (DSC)	°C	ca. 31
Appearance		colorless, transparent
Surface		tack-free

### Compatible with

Acronal 4888 is compatible with other substances commonly used in nonwovens and saturation applications.

### Crosslinking

Films formed from Acronal 4888 by the evaporation of water are already partially cross linked on drying. The degree of crosslinking can be increased by heating them to 150 – 180 °C.

Catalysts such as maleic acid, phosphoric acid, diammonium hydrogen phosphonate, and latent acid catalysts can be used to speed up the rate of the crosslinking reaction.

### Solvent resistance

The films formed from Acronal 4888 are insoluble in most organic solvents after they have been completely crosslinked, but they do swell on solvation.

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

## Application

### Features

Acronal 4888 is used to bond nonwoven fabrics. Nonwovens bonded with Acronal 4888 have high heat resistance and very little tendency to yellow. Acronal 4888 has been shown to be particularly effective for bonding polyester and glass fiber.

### Processing

The pH value of compounding formulations should be in the neutral-to-alkaline range before Acronal 4888 is added. Rotary displacement pumps are recommended for coating colors prepared with Acronal 4888.

## 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 4888.

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## Storage

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

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