

# Fiber Bonding

## Technical Data Sheet

# Acronal<sup>®</sup> S 888 S



### 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	%	~ 49.0
pH value		~ 8.0
Viscosity at 23 °C (Brookfield RV, Spindle #2, at 20 rpm)	cps	~ 100 – 600

#### 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<sup>®</sup> S 888 S is compatible with other substances commonly used in nonwovens and saturation applications.

#### Crosslinking

Films formed from Acronal<sup>®</sup> S 888 S 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<sup>®</sup> S 888 S are insoluble in most organic solvents after they have been completely crosslinked, but they do swell on solvation.

### Applications

#### Features

Acronal<sup>®</sup> S 888 S is used to bond nonwoven fabrics. Nonwovens bonded with Acronal<sup>®</sup> S 888 S have high heat resistance and very little tendency to yellow. Acronal<sup>®</sup> S 888 S 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<sup>®</sup> S 888 S is added. Rotary displacement pumps are recommended for coating colors prepared with Acronal<sup>®</sup> S 888 S.

## 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.

### Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Acronal® S 888 S.

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## Storage

Acronal® S 888 S has a shelf life of six months from delivery date, provided it is stored in accordance with the "Handling and Storage of polymer dispersions" brochure. Technical information regarding the storage of BASF polymer dispersion products is available upon request.

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