

# Polyfam<sup>®</sup> 431

## Technical Data Sheet

### Characteristics

Polyfam<sup>®</sup> 431 is a non-plasticized aqueous dispersion based on vinyl acetate and acrylic esters.

### Stabilization

Surfactants

### Recommended Application Areas

Exterior paints  
Interior paints

### Specification

These technical data are determined for each batch before its release by our quality control laboratory.

	Unit	Value	Dev.
<b>Solids content</b> (ISO 3251: 1h; 105 °C)	%	55 ±	1
<b>Viscosity</b> (ISO 2555; Spindle no. 4; 20 rpm; 23 °C) Brookfield-viscometer RVT	mPa.s (cP)	3500 ±	1000
<b>pH value</b> (ISO 976)		4.5 ±	0.5

### Additional Data

These data are solely to describe the product. They are not subject to constant monitoring or part of the specification.

	Unit	Value
<b>Dispersion</b>		
<b>Minimum film forming temperature (MFFT)</b> (ISO 2115)	°C	< 0
<b>Density</b> (ISO 2811)	g/cm <sup>3</sup>	approx 1.04

### Film \*

#### Appearance

Clear, tack-free and slightly flexible

#### Hardness, Koenig (ISO 1522)

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Dried 1hr at 60°C then 24hr at 23±2°C and 50±5% relative humidity (ISO 3270)  
Tested at 23±2°C and 50±5% relative humidity (ISO 3270)

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

## Applications

Polyfam<sup>®</sup> 431 is a suitable binder for indoor paints, giving those paints a high scrub resistance.

## Processing

Polyfam<sup>®</sup> 431 dries at temperatures lower than 0 °C to form clear and tack free films.

The usual titanium dioxide and coloured pigments, as well as fillers may be used for the formulation of paints. To ensure an adequate storage stability long term storage trials are recommended at any rate, especially when fillers and coloured pigments with a large specific surface area are chosen. Salts of low molecular weight polyacrylic acids (e.g. Polyfam<sup>®</sup> 101) work well as dispersing agents, sometimes in combination with suitable wetting agents. The required quantities are between 0.3 and 1% active substance relative to the pigment / extender mixture. To receive the best scrub resistance in indoor paints, it is necessary to optimize the amount and type of dispersing agents.

Many thickeners are usable to adjust the desired viscosity of the paint and to improve its processability. Very good results are achieved by employing Tylose<sup>®</sup> grades of the H and MH series with retarded swelling behavior and medium to high molecular weight. Using acrylic thickeners such as Polyfam<sup>®</sup> 103 with higher thickening efficiency and lower water absorption, is sometimes preferred.

The minimum film forming temperature of the dispersion will be reduced by adding sufficient amount of coalescing agents (and in some times also plasticizers) which must be done with due care. The frost resistance of the binder can be improved by adding some water miscible solvents such as glycols (eg ethylene glycol).

A lot of commercially available defoamers can be included in order to prevent excessive foaming in the paints. Trials must be carried out to determine the most suitable grades and the correct concentration.

Organic pigments should be tested for their suitability for exterior paints, especially in the case of pasted tones.

## Preservation and Storage

The dispersion contains some initial preservatives to prevent attack by micro organisms. In order that the product is also sufficiently protected against microbial contamination during further storage in opened drums or storage tanks, a suitable preservative should be added despite our preliminary preservation measures and the tanks and pipework should be kept adequately clean.

Prior to use, Polyfam<sup>®</sup> 431 should be stored for no longer than 6 months at temperatures as constant as possible between 0 and 35 °C and must be protected from frost and direct exposure to sunshine. Furthermore, it must be ensured that already opened drums or containers are always tightly closed.

The technical data ascertained by our quality control laboratory at the time of product release may vary according to the storage conditions and may deviate from the stated limits.

## Industry Safety and Environmental Protection

Not a hazardous substance.

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