

Polyfam[®] 777

Technical Data Sheet

Characteristics

Polyfam[®] 777 is a non-plasticized aqueous dispersion based on acrylic and methacrylic acid esters.

Stabilization

Surfactants

Recommended Application Areas

Gloss paints

Fiber cement coatings

Masonry paints

Window frame coatings

Impregnating stains for wood

Wood coatings, pigmented

Wood stain varnishes

Metal coatings

Deep shade paints

Primers

Specification

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

	Unit	Value	Dev.
Solids content (ISO 3251: 1h; 105 °C)	%	46 ±	1
Viscosity (ISO 2555; Spindle no. 2; 60 rpm; 23 °C) Brookfield-viscometer LVT	mPa.s (cP)	100 ±	50
pH value (ISO 976)		8.5 ±	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
Dispersion		
Particle size	µm	approx 0.12
Minimum film forming temperature (MFFT) (ISO 2115)	°C	13
Density (ISO 2811)	g/cm ³	approx 1.05
Film		
Appearance		clear and tack-free
Glass transition temperature Tg (Calculated)	°C	approx 24
Hardness, Koenig (ISO 1522)	s	95

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[®] 777 is a suitable binder for the production of dispersion-based gloss paints. It can also be used for the manufacturing of other coatings with a high binder content such as wood stains or vinyl silk paints. Paint films have a good resistance to ageing and are notable for their improved wet adhesion on old alkyd resin paint films under the influence of water and/or simultaneous mechanical stress.

Processing

Polyfam[®] 777 dries at temperatures higher than approx. 13 °C to form clear and crack-free films with high flexibility, high resistance to alkali and low water absorption.

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[®] 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 obtain high gloss values of the dried paint film, it is absolutely necessary to use a mill base. The desired fineness of the mill base is achieved by a dissolver or another suitable dispersing equipment.

Care should be taken to ensure that the pH values of the mill base and the ready-to-use paint are between 8.5 and 9.0.

The addition of suitable associative acrylic (e.g. Mowilith VDM 7000) or PU thickeners imparts rheological properties to gloss paints similar to those of conventional alkyd paints.

Different wax emulsions can be added to improve the block resistance.

The minimum film forming temperature of the dispersion will be reduced by adding sufficient amount of coalescing agents (and some times also plasticizers) which must be done with due care. Water miscible solvents like ethylene glycol improve the frost resistance.

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.

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[®] 777 should be stored for no longer than 6 months at temperatures as constant as possible between 5 and 25 °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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