

Polyfam[®] 706

Technical Data Sheet

Characteristics

Polyfam[®] 706 is a nonionic self-crosslinking aqueous dispersion based on acrylic and methacrylic acid esters.

Stabilization

Surfactants

Recommended Application Areas

General purpose nonwovens
Fabric finishing and backcoating
Medical nonwovens
Filters

High loft
Interlinings
Wet wipes
Bonding of polyester fiberfill

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)	200 ±	150
pH value (ISO 976)		2.5 ±	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		
Ionic nature		Nonionic
Minimum film forming temperature (MFFT) (ISO 2115)	°C	19
Density (ISO 2811)	g/cm ³	approx 1.07
Film *		
Appearance		clear and tack-free
Glass transition temperature Tg (Calculated)	°C	35
Hardness, Koenig (ISO 1522)	s	131

*Force dried at 150°C for 4min and at 21°C for 24hr and 53% relative humidity (ISO 3270)

Tested at 23°C and 53% 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[®] 706 is a suitable binder for a wide variety of nonwoven applications. It imparts shear strength, transverse strength, tear strength, wet tensile strength and stiffness to the finished fabrics by performing a firm resilient film. The binder is economical and offer ease of usage by spraying coating, dipping, nipping, foaming or in bath. Polyfam[®] 706 can be simply blended with other dispersions to achieve intermediate properties.

The various applications include garment, interlining, wadding, apparels, disposable and durable surgical upholstery, filters, geo-textiles, facial tissues, hygienic products, glass tissues, etc.

Polyfam[®] 706 performs well with synthetic fibers, cellulose and blends and can be used on conventional bonding, drying and curing lines. It is also recommended for use in fabric finishing, pigment printing, spray bonding, fiber fill, adhesive for lamination, flocking and paper coating.

Polyfam[®] 706 is characterized by its ease of formulation, resistance to discoloration, excellent pigment bonding properties and durability to washing and drycleaning.

It offers formulating flexibility with additives due to its nonionic nature and is especially recommended for fabric finishing and backcoating applications when a firm hand is desired.

Processing

Polyfam[®] 706 is a self crosslinking acrylic emulsion and does not require the addition of an external crosslinking agent for durability or wet strength. However, where maximum durability or solvent resistance is required, a thermosetting resin such as melamine formaldehyde can be used.

Acid catalysts such as ammonium nitrate and oxalic acid can be used to accelerate the cure of Polyfam[®] 706 where curing capacity is limited.

A nonionic surfactant such as Triton[®] X-114, is recommended in the formulation to achieve better wetting of the fibers. This surfactant should be used at a starting level of 0.5% solids on polymer solids and diluted with at least 3 times its weight of warm water before being added.

A general purpose defoamer such as BYK[®] 033 is recommended with Polyfam[®] 706 at a starting level of 0.05 to 0.1% (product as supplied) on the total weight of the formulation. Prior to use, any defoamer should be pre-emulsified with at least an equal weight of warm water and added to the emulsion, under agitation, before other compounding agents.

To maximize emulsion shear stability, the pH of the bath should be adjusted to 8.0 to 8.5 with a volatile base such as ammonium hydroxide.

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.

Prior to use, Polyfam[®] 706 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.

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.