

Joncryl[®] FLX 5201

Product Description	Joncryl FLX 5201 is an aliphatic polyurethane dispersion for use in lamination inks for medium-duty food packaging applications.
Key Features & Benefits	<ul style="list-style-type: none">- Excellent lamination bonds on OPP, PET, and nylon substrates- Very good printability and resolubility- Good block resistance- Swiss List compliant* for food packaging
Chemical Composition	Polyurethane dispersion

Properties

Typical Properties	Appearance		white emulsion
	Molecular weight (Mw)		> 200,000
	Non-volatile	%	40
	pH		8.5
	Viscosity at 25°C (Brookfield #3 LVF, 30 rpm)	cps	100
	Density at 25°C	g/cm ³	1.05
	MFFT	°C	< 5
	Freeze-thaw stable		No
	Total VOC	% wt	< 1.0

These typical values should not be interpreted as specifications.

Application

Joncryl FLX 5201 is a polyurethane dispersion that is used as a vehicle for adhesive and extrusion lamination inks for food packaging on polyolefin and polyester substrates. When used alone or in combination with Joncryl FLX 5000-A, Joncryl FLX 5201 provides water-based lamination inks with high bond strength, very good resolubility, and print performance.

Joncryl FLX 5201 is recommended for applications such as:

- Printing inks for flexographic or gravure applications

The combination of high lamination bonds on polyester substrates, good printability and Swiss List compliance*, makes Joncryl FLX 5201 a unique vehicle for medium and high-performance flexible packaging applications.

**All components of Joncryl FLX 5201 are listed on Swiss List Annex 6, List A and B. Contact the BASF product regulatory group for further information.*

Formulation Guidelines

Joncryl FLX 5201 can be used in conjunction with resinated or surfactant-based commercially available pigment dispersions and is compatible with standard ink making materials.

Surfactant-based TiO₂ pigment dispersions are recommended in opaque white formulations.

The ratio of Joncryl FLX 5201 to Joncryl FLX 5000-A can vary based on package design requirements. Higher levels of Joncryl FLX 5201 increase bond strength and higher levels of Joncryl FLX 5000-A improve printability and resolubility.

Starting Point Formulation

The following starting point formulations are recommended for initial evaluations of Joncryl FLX 5201. Additional optimization of the formulations may be required to achieve desired results for specific applications.

White Ink at various ratios of Joncryl® FLX 5201 : Joncryl® FLX 5000-A

Materials	100:0	75:25	50:50
75% TiO ₂ dispersion	40.0	40.0	40.0
Joncryl® FLX 5201	56.4	42.3	28.2
Joncryl® FLX 5000-A		14.1	28.2
Isopropanol	3.0	3.0	3.0
Joncryl® Wax 4	0.2	0.2	0.2
Antifoam	0.3	0.3	0.3
Wetting agent	0.1	0.1	0.1
Total	100.0	100.0	100.0
Add as needed to adjust viscosity:			
Rheovis® PE 1320 NC	0.3	0.9	0.8

Pigmented Ink at various ratios of Joncryl® FLX 5201 : Joncryl® FLX 5000-A

Materials	100:0	75:25	50:50
Pigment dispersion	40.0	40.0	40.0
Joncryl® FLX 5201	56.4	42.3	28.2
Joncryl® FLX 5000-A		14.1	28.2
Isopropanol	3.0	3.0	3.0
Joncryl® Wax 4	0.2	0.2	0.2
Antifoam	0.3	0.3	0.3
Wetting agent	0.1	0.1	0.1
Total	100.0	100.0	100.0
Add as needed to adjust viscosity:			
Rheovis® PE 1320 NC	1.1	0.8	0.3

White Pigment Concentrate

Materials	
TiO ₂	75.0
Antifoam	0.5
Dispersant	7.5
Water	17.0
Total	100.0

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 Joncryl FLX 5201.

Storage

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

Important

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