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Joncryl® 8383-A

Product Description

Joncryl 8383-A is a self-crosslinking acrylic emulsion for outdoor joinery industrial wood coating applications.

Key Features & Benefits

- Good clarity and "warmth of wood"
- Excellent water resistance
- Good block resistance and sandability
- Very good wet adhesion and flexibility

Chemical Composition

Acrylic emulsion

Properties

Typical Properties

Appearance		translucent emulsion
Non-volatile at 145°C (2 g, 30 minutes)	%	~ 40.0
pH at 25 ± 1°C		~ 8.0
Viscosity at 25.0 ± 0.2°C (Brookfield #2LV, 30 rpm, 30 seconds)	cps	~10 – 400

Typical Characteristics

Density at 25°C	g/cm^3 (lbs/gal)	1.03 (8.6)
MFFT	°C	12
Freeze-thaw stable		No

These typical values should not be interpreted as specifications.

Applications

Joncryl 8383-A has been designed for factory-applied clear and pigmented wood finishes, on fast drying lines at room temperature drying. Joncryl 8383-A emulsion is also very suitable for water and chemical resistant primers. (It can easily be over coated with a solvent-based system.)

Joncryl 8383-A shows excellent water resistance, good hardness, block resistance, and excellent wet adhesion/elasticity (for outdoor purposes). Joncryl 8383-A allows the formulation of a coating with a unique balance of chemical resistance, mechanical properties, and appearance. For outdoor purposes, Joncryl 8383-A shows very good wet adhesion. The crosslinking chemistry of Joncryl 8383-A allows drying at room and elevated temperatures. The good clarity, hardness development, and block resistance in combination with water resistance makes this product suitable for replacing some solvent-based coatings.

Joncryl 8383-A is recommended for applications such as:
- Interior/exterior wood coatings for millwork applications
- Interior/exterior concrete applications

Formulation Guidelines

Coalescing - Joncryl 8383-A film forming properties are excellent; the product is designed for efficient response to coalescents, resulting in a low coalescing solvent demand. For optimal film formation, it is crucial to select a well-balanced coalescing package, see starting point formula. (The use of Ethylene glycol mono n-butyl ether (EB) can cause a viscosity decrease over time.)

Stability - Joncryl 8383-A is a self-crosslinking polymer. It is recommended to test the stability of the formulated lacquer for 4 weeks at 49°C.

Appearance - The wetting, clarity, flow, and leveling of Joncryl 8383-A over light and dark wood is excellent and no special additives are needed.

Block resistance - Joncryl 8383-A shows excellent early block resistance due to fast drying and fast hardness development. The product is easy to sand without clogging the sandpaper. Block resistance is strongly influenced by the coalescing solvent package and drying circumstances.

Starting Point Formulations

The following starting point formulation is recommended for an initial evaluation of Joncryl 8383-A. Additional optimization of the formulation may be required to achieve desired results for specific applications.

Joncryl 8383-A CLEAR SEALER/TOPCOAT, Formula 150-B

Materials	Pounds	Gallons
Joncryl® 8383-A	619.87	71.25
Hydropalat® WE 3320	3.21	0.37
Premix next three (3) materials:		
Water	166.86	20.02
Dowanol[1] DPM	12.35	1.55
Dowanol[1] DPnB	27.31	3.61
Then Add:		
FoamStar® ST 2436	1.76	0.22
Joncryl® Wax 26	21.18	2.58
Hydropalat® WE 3322	1.51	0.18
Rheovis® PU 1250 NC	2.00	0.22
Total	**856.05**	**100.00**

Formulation Attributes

Solids	30.4% by wt, 30% by volume
VOC	139 g/l, 1.15 lbs/gal

Comparative Data

Joncryl 8383-A vs Joncryl 1982

Chemical Resistance, 7 Day, 1 Hour Covered Spot Test

	Joncryl® 8383-A Self-crosslinking Clear Coating	Joncryl® 1982 Self-crosslinking Clear Coating
Initial:		
Water	0	2
Ethanol, 50%	1	1
Ethanol, 100%	2.5	2
IPA	3	2
Formula 409[2]	2	2
NKCA	0	1
Recovered:		
Water	0	0
Ethanol, 50%	0	0
Ethanol, 100%	2	1
IPA	3	1
Formula 409[2]	0	0
NKCA	0	0
Key: *Degree of Effect: 0 = No Effect; 1 = Very Slight Effect; 2 = Slight Effect; 3 = Moderate Effect; 4 = Severe Effect*		

König Hardness (oscillations)

	Joncryl® 8383-A Self-crosslinking Clear Coating	Joncryl® 1982 Self-crosslinking Clear Coating
1 Day	42	62
4 Days	60	101
7 Days	60	106

[1]Trademark of The Dow Chemical Company.
[2]Registered trademark of The Clorox Company.

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 8383-A.

Storage

Please refer to the “Handling and Storage of polymer dispersions” brochure.

Important

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