

Joncryl[®] 1532

Product Description	Joncryl 1532 is an acrylic emulsion for maintenance and industrial coating applications.
Key Features & Benefits	<ul style="list-style-type: none">- Excellent adhesion to multiple substrates- Humidity resistance- Corrosion resistance
Chemical Composition	Acrylic emulsion

Properties

Typical Properties	Appearance	opaque emulsion
	Non-volatile at 145°C (2g, 60 minutes)	% ~ 51
	pH at 25°C	~ 8.0
	Viscosity at 25°C (Brookfield #2LV, 30 rpm, 30 seconds)	cps ~ 400
	Density at 20°C	g/cm ³ (lbs/gal) 1.03 (8.57)
	Tg	°C (°F) 12 (53.6)
	Freeze-thaw stable	Yes

These typical values should not be interpreted as specifications.

Applications

Joncryl 1532 is an acrylic emulsion designed to provide adhesion to a variety of substrates including metals, plastics, and previously painted or chalked substrates. It also provides humidity resistance, water resistance, and corrosion resistance. This emulsion has utility in primer/topcoat and direct-to-metal applications. Joncryl 1532 also provides excellent tannin and stain blocking properties in topcoat applications.

Joncryl 1532 is recommended in applications such as:

- Interior/exterior general metal coating applications
- Interior/exterior wood coatings for flooring, furniture, or millwork applications
- Interior/exterior plastic component coating applications
- Interior/exterior concrete coating applications

Formulation Guidelines

Coalescence – Joncryl 1532 is a room temperature film former and can be formulated without added coalescing solvents. This allows the formulation of coatings approaching zero VOC. However, performance dramatically improves as the co-solvent level is increased. A minimum of 10% on resin solids of most co-solvents is recommended, and 15 – 20% on resin solids will generally give optimum properties. A wide range of solvents including HAPS-free solvents can be used with Joncryl 1532.

Blends of Ethylene glycol monobutyl ether and Diethylene glycol monobutyl ether have been found to provide excellent performance, while Diethylene glycol methyl ether has been found to provide good early water spot resistance. Texanol¹ has been found to be useful for film formation under severe conditions, such as 40° F and 90% humidity.

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Dispersion Characteristics - Joncryl 1532 is shear stable and can be used as a grind vehicle if great care to temperature development and dispersion time is given. Using Joncryl 1532 in the grind however is not normally recommended. Long dispersion times or high viscosity grind bases will generate heat, which causes the system to lose amine and gelation can occur. If dispersion in Joncryl 1532 is desired, a slower amine such as DMEA (dimethyl ethanolamine) can be added to compensate for amine lost during the dispersion phase. Normally 2 – 5 pounds added as a 50% solution in water will stabilize the system sufficiently; however, good manufacturing practice will still be important.

Pigment Selection - Inhibitive pigment selection is also important for good corrosion resistance and long-term package stability. Halox² SW-111 has been found compatible in most formulations. Inhibitive pigments such as Halox² SZP-391, Butrol³ 22, and Busan³ 11-M1 can be used with proper formulation technique. It is important to add inhibitive pigments before other pigments to avoid problems during the dispersion phase. Inhibitive pigments such as Nalzin⁴ 2, Heucophos⁵ ZMP and Heucophos⁵ ZPA have not exhibited compatibility with Joncryl 1532. Extender pigments have not been found to be problematic and standard formulating practices can be followed.

Defoamer Selection – The selection of defoamers is formulation dependent. FoamStar ST 2434 has been found to provide a balance of efficiency and compatibility. Defoamer level and compatibility should always be optimized for the desired application.

Starting Point Formulations

The following starting point formulations are recommended for an initial evaluation of Joncryl 1532. Additional optimization of the formulations may be desired to achieve maximum suitability for specific applications.

Joncryl® 1532 SEMI-GLOSS DIRECT-TO-METAL (<50 g/L)

Materials	lbs	gal
Joncryl 1532	165.42	19.24
DI Water	55.14	6.61
FoamStar ST 2434	2.26	0.28
Hydropalat WE 3650	3.76	0.46
Dispex Ultra PX 4290	3.76	0.42
Add while mixing:		
Halox ² SW-111	77.20	3.30
Ti-Pure ⁶ R-902	165.42	4.96
Imsil ⁷ A-10	89.85	4.06
Disperse at high speed (1500 rpm) to 5 Hegman, then add:		
LETDOWN		
Joncryl 1532	450.52	52.41
Premix water and solvents:		
DI Water	30.55	3.66
Ethylene glycol n-butyl ether	13.18	1.75
Dipropylene glycol methyl ether	7.11	0.93
Then add:		
FoamStar ST 2434	2.26	0.28
Add slowly with good agitation:		
Raybo ⁸ 60	15.04	1.62
Total	1081.46	100.00

Formulation Attributes

Solids (wt %)	61.0
Solids (vol %)	50.4
PVC (%)	25.2
VOC (g/L)	48.4

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³Registered trademark of Buckman.

⁴Registered trademark of Elementis.

⁵Registered trademark of Heubach Group.

⁶Registered trademark of The Chemours Company.

⁷Registered trademark of Covia Holdings LLC.

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BONDING PRIMER FORMULATION

This formulation can be applied over concrete/ceramic tiles to help improve adhesion of the topcoat to the substrate.

Materials	Pounds	Gallons
Joncryl® 1532	49.0	5.7
Water	51.0	6.1
Total	100.0	11.8

Formulation Attributes

Resin non-volatiles	25.0% wt
Density	8.5 lbs/gal

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 1532.

Storage

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

Important

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