Industrial Coatings

Technical Data Sheet

Joncryl® 1984

We create chemistry

Product Description **Joncryl® 1984 is a hard, self-crosslinking acrylic emulsion for industrial coating applications.**

Key Features & Benefits

- Good chemical resistance
- Good UV resistance
- Good scratch and mar resistance
- Low foaming
- Blend vehicle for PUD's

Chemical Composition **Acrylic emulsion**

Properties

Typical Properties

Appearance	translucent emulsion
Non-volatile at 145°C (2g, 60 minutes)	~ 41.0 %
pH at 25 ± 1°C	~ 7.8
Viscosity at 25°C (Brookfield #2LV, 60 rpm, 30 seconds)	≤ 250 cps

Typical Characteristics

Density at 20°C	1.04 g/cm^3 (8.63 lbs/gal)
Tg	78°C
Freeze-thaw stable	No

These typical values should not be interpreted as specifications.

Applications

Joncryl® 1984 is a one-pack, self-crosslinking acrylic emulsion that is non-formaldehyde emitting. A key use is for wood coatings that require resistance to various chemicals. This emulsion offers excellent clarity, low foaming, and excellent crack resistance. The chemical resistance of Joncryl® 1984 may allow its use in other applications, such as concrete coatings, specialty hardboard and plastics.

Joncryl® 1982 is recommended for applications such as:

- Interior/exterior concrete applications
- Interior/exterior wood applications

Formulation Guidelines:

Slip and Mar - In general, the use of 3 – 5 Joncryl® Wax 26 wax emulsion (wax solids on resin solids) will be sufficient to improve slip and mar resistance of the coating. For added slip and mar resistance, a combination of Joncryl® Wax 26 and Hydropalat® WE 3370 can be used.

Thickeners - Associative thickeners are preferred due to their minimal effect on gloss. Thickeners that offer some pseudoplasticity are useful in preventing sag.

Solvent Levels - The solvent package described in Formula 32004 - 3 provides good film formation with moderate hardness development. Decreasing the level of hydrophobic solvents, such as Dowanol[1] DPnB or Dowanol[1] PPh, will hasten hardness development, but may result in lower cold check resistance. Hydrophilic solvents, such as Ethylene glycol mono n-butyl ether (EB) and Diethylene glycol monobutyl ether (DB), may also be used as coalescers, but lower associative thickener efficiency will likely be observed.

Starting Point Formulations

The following starting point formulation is recommended for an initial evaluation of Joncryl® 1984. Additional optimization of the formulation may be required to achieve desired results for specific applications.

Joncryl® 1984 CLEAR SEALER/TOPCOAT, Formula 32004 - 3

Materials	Pounds	Gallons
Joncryl® 1984	608.63	70.61
Hydropalat® WE 3320	3.22	0.37
Premix:		
Water	137.60	16.52
Dowanol[1] DPM	34.97	4.40
Dowanol[1] DPnB	34.97	4.63
Then add:		
FoamStar® ST 2436	1.81	0.23
Joncryl® Wax 26	21.31	2.60
Hydropalat® WE 3322	1.51	0.18
Hydropalat® WE 3370	0.53	0.06
Rheovis® PU 1250 NC	3.52	0.40
Total	**848.07**	**100.00**

Formulation Attributes

Solids	30.6% by wt, 28.7 % by volume
VOC (calculated)	233 g/l, 1.95 lbs/gal

Coating Performance

7 Day chemical testing

Chemical Testing	Joncryl® 1984 Formula 32004 - 3	Joncryl® 1982 Formula 32004 - 2	Joncryl® 1980 Formula 32004 - 1
7 Day, Initial			
Water	0	0	0
50% Ethanol	0	0	0
100% Ethanol	2	2	2
70% IPA	3	2	3
0.5% Soap Solution	0	0	0
Formula 409[2]	3	1	3
Mustard	1	0	1
7 Day, Recovered			
Water	0	0	0
50% Ethanol	0	0	0
100% Ethanol	1	1	1
70% IPA	3	1	1
0.5% Soap Solution	0	0	0
Formula 409[2]	1	0	3
Mustard	0	0	1

Key: *Degree of Effect: 0 = No Effect; 1 = Very Slight Effect; 2 = Slight Effect; 3 = Moderate Effect; 4 = Severe Effect*

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

König Hardness (oscillations)

	Joncryl® 1984 Formula 32004 - 3	Joncryl® 1982 Formula 32004 - 2	Joncryl® 1980 Formula 32004 - 1
Days			
1	63	62	60
4	105	101	74
7	106	106	74

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.

Material Safety Data Sheet

All safety information is provided in the Material Safety Data Sheet for Joncryl® 1984.

Important

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