

Industrial Coatings

Technical Data Sheet



Joncryl[®] RPD 950-AC/P Polyol

Product Description	Joncryl [®] RPD 950-AC/P is a rapid property development (RPD) acrylic polyol for polyurethane coating applications.
Key Features & Benefits	<ul style="list-style-type: none">- Balance of early hardness, fast cure, and pot life- Exceptional flow and leveling properties- Early buffability- Superior clarity and DOI- Excellent gloss- Excellent exterior durability- Very low in-can color- Low VOC capability
Chemical Composition	RPD acrylic polyol

Properties

Typical Properties	Appearance	clear liquid
	Non-volatile at 110°C (0.5g, 60 minutes)	~ 65%
	Hydroxyl number of solids	~ 110
	Viscosity at 25.0 ± 0.5°C (Brookfield #4LV, 30 rpm, 30 seconds)	1,000 – 8,000 cps
	Density at 20°C	~ 1.03 g/cm ³ (8.60 lbs/gal)
	Equivalent weight as supplied, on solids	~ 784, 510
	Tg	~ 27°C
	Solvent	Acetone/PCBTF (3:1)

These typical values should not be interpreted as specifications.

Applications

Joncryl[®] RPD 950-AC/P is a specialty acrylic polyol with rapid property development for solventborne 2K polyurethane systems in automotive refinish and general industrial applications. This polyol, when crosslinked with either Basonat[®] HI 100 or HI 190 B/S aliphatic trimer isocyanate, provides fast cure with early hardness development and a long pot life. Joncryl[®] RPD 950-AC/P offers early buffability for automotive refinish applications.

Joncryl[®] RPD 950-AC/P is recommended for applications such as:

- Interior/exterior automotive refinish applications
- Interior/exterior refinish primer surfacer
- Interior/exterior general metal coating applications
- Interior/exterior plastic coatings to polycarbonate and other plastics

Starting Point Formulation

The following starting point formulation is recommended for an initial evaluation of Joncryl® RPD 950-AC/P. Additional optimization of the formulation may be required to achieve desired results for specific applications.

2K POLYURETHANE AUTO REFINISH CLEAR COAT (30 min Sand & Buff Time (at 75°F)

Part A	Pounds Wt%	Gallons Vol%
Joncryl® RPD 950-AC/P polyol	38.37	38.31
Acetone	12.53	16.54
Methyl amyl ketone	6.36	8.15
n-pentyl propionate	3.23	3.85
PCBTF	13.85	10.78
Tinuvin® 5151	0.63	0.59
Efka® FL 3670	0.08	0.08
1% soln DBTDL in acetone	<u>1.25</u>	<u>1.65</u>
Subtotal	76.30	79.96
Part B		
Basonat® HI 190 B/S	10.81	10.01
PCBTF	12.89	10.03
Subtotal	23.70	20.04
Total	100.00	100.00

Formulation Attributes

Solids	35.2% by wt, 32.0% by volume
Viscosity (Brookfield, Zahn #2)	18 cP, 15 – 17 seconds
Weight per gallon	8.71 lbs/gal
NCO:OH ratio	1.05:1
VOC (calculated)	2.1 lbs/gal, 250 g/l
Coverage at 1 mil	513 ft ² /gal

Test Results using Starting Point Formulation

The following data is an example of the properties that can develop when Joncryl® RPD 950-AC/P polyol is spray applied and cured on B1000 cold rolled steel panels. Test data is provided using the above formula with added DBTDL catalyst, and using the same formula without added catalyst. Panels were given two coats painted approximately 3 minutes apart.

Test	Starting Point Formulation with added DBTDL*	Starting Point Formulation without catalyst*
Sandability (minutes after spray-out)	35	50
Buffability (minutes after spray-out)	35	50
Pot-life (doubling of viscosity)	80 min	120 min
Gardner Dry Time – Set-to-touch	10 min	10 min
– Tack-free	18 min	29 min
– Dry hard	24 min	37 min
– Dry through	39 min	54 min
Pencil Hardness – 24 hrs (gouge)	F	F
– 7 days (gouge)	H	H
Direct & Indirect, impact resistance – 7 days	140 in-lbs	140 in-lbs
– 14 days	140 in-lbs	140 in-lbs
MEK Double Rubs – 24 hours	260	240
– 7 days	>300	>300

*Note: Booth conditions 70°F. Film build 2.2 mil avg.

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® RPD 950-AC/P.

Important

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