

Industrial Coatings

Technical Data Sheet

Joncryl[®] RPD 950-B Polyol

Preliminary Data Sheet



The Chemical Company

Product Description	Joncryl [®] RPD 950-B 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

Product Specifications	Appearance	clear liquid
	Non-volatile at 150°C (0.5g, 60 minutes)	59.88 – 61.88%
	Hydroxyl number	105 – 115
	Viscosity at 25.0°C (Brookfield #4LV, 30 rpm, 30 seconds)	1,000 – 8,000 cps
Typical Characteristics	Density at 68°F	8.44 lbs/gal
	Equivalent weight as supplied, on solids	784, 510
	Tg	27°C (81°F)
	Flash point	- 20°C
	Solvent	n-Butyl Acetate
	Freeze-thaw stable	Yes

These typical values should not be interpreted as specifications.

Applications

Joncryl[®] RPD 950-B 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-B offers early buffability for automotive refinish applications.

Joncryl[®] RPD 950-B 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-B. 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-B 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
Irgaflow® 110	0.08	0.08
1% soln DBTDL in acetone	1.25	1.65
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 cps, 15 – 17 seconds
Weight per gallon	8.71 lbs/gal
NCO:OH ratio	1.05:1
VOC (calculated)	2.4 lbs/gal, 250 g/l
Coverage at 1 mil	513 ft ² /gal

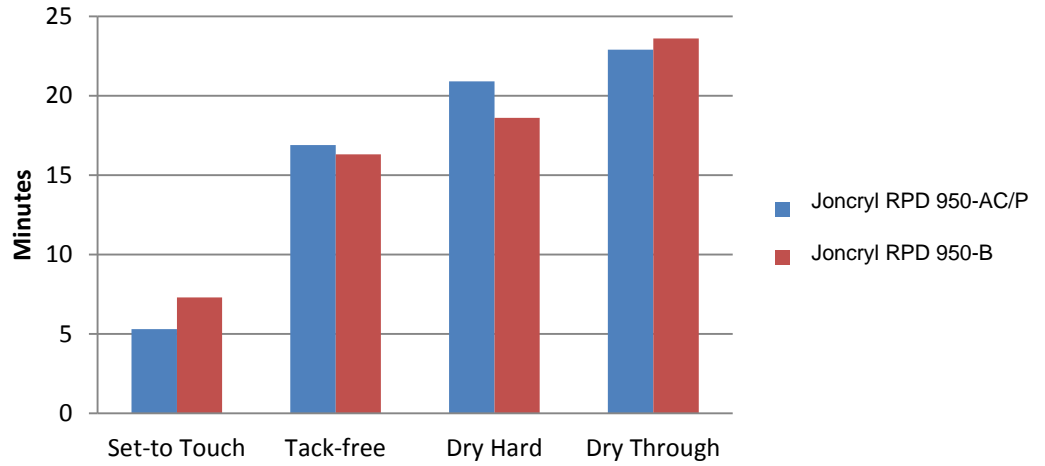
Test Results using Starting Point Formulation

The following data is an example of the properties that can develop when Joncryl® RPD 950-B polyol is spray applied and cured on B1000 cold rolled steel panels. The data below shows performance of the RPD 950-B polyol compared to RPD 950 AC/P.

Test	Starting Point Formulation RPD 950-B	Starting Point Formulation RPD 950 AC/P
Sandability (minutes after spray-out)	35	35
Buffability (minutes after spray-out)	35	35
Pot-life (doubling of viscosity)	110 min	80 min
Pendulum Hardness : 1 - 7 days (# of swings)	55 - 75	50 - 70
30 days (# of swings)	110 - 120	90-115
Direct & Indirect, impact resistance – 7 days	N/A	140 in-lbs
– 14 days	N/A	140 in-lbs
MEK Double Rubs – 24 hours	N/A	260
– 7 days	N/A	>300

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

Dry-Time Testing



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[®] RPD 950-B.

Important

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