



# SYNPOL PRODUCTS PRIVATE LTD.

Regd Office & Factory: 77, G.V.M.S. AUDYOGIC VASAHT LTD.,  
ODHAV, AHMEDABAD – 382 415, INDIA

PRODUCT CODE : MISC. / 10.08

## Synpol PU-640 & Synpol L-50

TYPE : Polyacrylic polyol - Polyisocyanate based two component coating system.

SPECIFICATIONS :	Synpol PU-640	Synpol L-50
1) Appearance	Water white clear liquid	Straw colour clear liquid
2) Density @ 25 <sup>0</sup> C.	0.97 - 0.99	1.02 - 1.04
3) % Solids @ 120 <sup>0</sup> C. for 2 hrs.	48 - 52	46 - 50
4) Solvent	Xylene, Cellosolve acetate	Ethyl acetate
5) Viscosity @ 25 <sup>0</sup> C., by g.t., poises	3 - 5	< 0.5
6) Hydroxyl value of supply	40 - 50	-----
7) NCO content of supply	-----	8.35 - 9
8) Mixing ratio, parts by weight /volume	Two	one
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9) Mix viscosity @ 25 <sup>0</sup> C. by FC4, seconds	90 - 100	
10) Pot life @ 25 <sup>0</sup> C., hours.	12	
11) Curing time @ 25 <sup>0</sup> C.	Surface dry, minutes	5 - 10
	Tack free dry, minutes	20 - 30
	Hard dry, hours	2.5 - 3
12) Film properties,	Gloss	Very good
	Hardness	Excellent
	Flexibility	Moderate

**SOLUBILITY :** Synpol PU-640 & Synpol L-50 are soluble in Ethyl acetate, Butyl acetate, M.E.K. and Cyclohexanone. It is partially soluble in Aromatic Hydrocarbons and is insoluble in Aliphatic Hydrocarbon. Alcohols and Amine based solvents should not be used as they react with Synpol L-50. In all formulations containing Synpol L-50, anhydrous ( moisture free ) solvents should be used for thinning, as Synpol L-50 is sensitive to moisture.

**APPLICATIONS :** Synpol PU-640 & Synpol L-50 based polyurethane lacquer finds applications in clear and pigmented coatings for household appliances, plastic and metal cabinets for TV, audio, VCR, etc., electric motors, fans, sewing machines, toys, engineering goods, etc. It also finds application as wood finishes in furniture industries, giving excellent gloss and high build of coatings, very good resistance to hot and cold drinks, liquors, weak acids & alkalies, vegetable oils, fruit juices and prepared food items, etc., coupled with excellent abrasion resistance. Special grade Synpol PU-640 (Matt) is also available where matt finish is preferred.

### ADVANTAGES :

- High build.
- Long pot life.
- Excellent application properties (spray or roller coated).
- Fast drying times and minimum dust pick-up.
- High gloss and excellent gloss retention.
- Excellent durability.
- Good adhesion to all types of primers and good recoatability.
- Less expensive than polyester based polyurethane (much lower isocyanate requirement).
- Very good resistance to aromatic & aliphatic hydrocarbons and water. It has limited resistance to lower alcohols, ketones.

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**DISCLAIMER:** Above Specifications are subject to change without prior notice and company reserves the right to modify the same at any time

Type	Two pack Polyurethane	
General composition	Acrylic – Aromatic Isocyanate	
Finish	Glossy	
Mixing ratio (Resin : Hardener)	2 : 1 by weight / by volume	
Temperature resistance	130° – 140°C	
Pot life	12 hours	
Application	Air-spray / brush / Airless spray / Roller	
Recommended net film thickness	90 microns	
Recommended DFT	40 microns	
	BASE	HARDENER
% Non-volatile by volume	50 ± 2	49 ± 2
Density at 25°C	0.97 – 0.99	1.02 – 1.04
Viscosity at 25°C by Ford Cup No. 4, Seconds	130 – 140	40 – 60
Mix viscosity at 25°C by Ford Cup No. 4, Seconds	90 – 100 Seconds	
Drying time, Minutes		
Surface dry	5 – 10	
Tack-free	20 – 30	
Hard dry	2.5 – 3	
Full curing	7 days	
Theoretical coverage	8 – 10 Sq. mtr / ltr / coat	
Overcoat interval	Minimum 4 – 5 hours Maximum 4 – 5 days	
Flash point	Above 20°C	
Recommended Thinner	Dilution Thinner PU-640 Clean up Thinner PU-640	
Shelf life at room temperature	6 months	

## MATERIAL SAFETY DATA :

Product name	Synpol PU-640	Synpol L-50
Flash point <sup>0</sup> C. (Abel closed cup)	31	28
Flammability	Moderate fire risks.	
Toxicity	Moderately toxic by exposure and inhalation due to vapours of Ethyl acetate, Xylene and Cellosolve acetate.	
Handling	Keep away from sources of ignition, provide all electric connections of flame-proof design. Wear safety glasses, rubber gloves and protective clothings. Polyurethane systems are highly sensitive to moisture and water, and hence should be kept in dry place and closures of the packings should be kept in air-tight position.	
Emergency treatment and measures		
1 Hygienic precautions	Adequate ventilations.	
2 Hygienic treatments (First Aid)	Flush eyes thoroughly with water. Apply ophthalmic cortisone for conjunctivitis and keratities. Wash out contaminated skin with soap and water. Gastric lavage (stomach wash), if swallowed, followed by saline catharsis.	
3 Fire precautions (in case of outbreaks)	Use dry chemical or carbon dioxide. Water spray may help to keep containers cool, to dilute leaked resins and to diffuse vapours.	
Spills and leakage	Absorb liquid materials in sand and collect solid material and burn under hood in incinerator.	
Disposal and waste treatment	Spray into furnace under controlled conditions.	

### STORAGE :

Synpol PU-640 and Synpol L-50 should be stored in cool and dry place under the shade. The properties are so adjusted to have a storage stability of minimum 6 months.

### PACKING :

25 kgs. M.S. drums.

### DISCLAIMER :

Information in this literature is to the best of our knowledge true and accurate. However, since conditions under which our products may be used are beyond our control, recommendations are made without warranty or guarantee.

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