



Polyester Resin 940

Product Name: Polyester Resin 940

Description: IK940 polyester resin for casting orthophthalic clear unsaturated polyester with low exothermic behavior.

Properties and applications: The clarity and exothermic behavior of IK940 makes it suitable for casting production. The curing rate of it allows the cast sheets, rods, blanks blocks and castings to be machines cut or polished without any difficulty.

IK940 has very good compatibility with essence. Pigment pastes and additives used in the production. When used for producing big castings and embedding, minimum amount of accelerator should be used and cure time so as to prevent discoloration and cracking that may occur otherwise.

Typical properties of liquid resin.

Property ^{*1}	Value
Acid Value	35 ± 5 mgr KOH/gr
Appearance	Clear liquid
Solid content	63 ± 2 %
Viscosity ^{*2}	300 - 350 cps
Specific gravity	1.05 – 1.1 gr/cm ³
Gel time ^{*3}	10 - 13 min
Time to Peak	16 - 20 min
Peak exotherm	115 ± 5 °C
Shelf life	6 Month

*1 : Measurement was obtained under 25°C

*2 : LVT# 3-60 rpm (@) 25°C

*3 : Cobalt 10% , 0.1 phr MEKP A 60 , 1.5% (@) 25°C



TYPICAL CLEAR CASTING PROPERTIES OF CURED

PROPERTY	ST ^{*4}	TEST METHOD
Tensile strenght	30 ± 5 MPa	ASTM D638
Tensile modulus	1.5 – 1.7 Gpa	ASTM D638
Tensile elongation	4 – 5 %	ASTM D638
Flexural strength	80 ± 5 Mpa	ASTM D790
Flexural modulus	1.8 – 2 Gpa	ASTM D790
Volume shrinkage	1 – 2 %	ASTM D2566
HDT ^{*5}	50 ± 5 °C	ASTM D648
Barcol Hardness	30 ± 5	ASTM D2583

*4 : ST values based on conversion

*5 : Cure condition for HDT 24 hours at room temperature then 2 hours at 105°C

Notice in Use:

1. If IK940 is blended with cobalt salt promoters shelf life will be shortened. promoted IK940 must be used within three months.
2. The gel time of IK940 is affected primarily by catalyst concentration and temperature. The variation of cure characteristics may be caused by the variations of catalyst. Humidity pigment fillers and other additives it is recommended that the fabricators check the cure characteristic with a small quantity resin before proceeding for bulk production.
3. IK940 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK940 is a potentially reactive chemical please store it in dark and keep away from heat and direct sunshine.
5. Containers not completely emptied must be closed immediately after use.

PACKAGE:

Standard packing is 200 kg steel drum.