

Polyester Resin IK 531

Technical Data Sheet

Product Name: IK531 General Purpose Unsaturated Polyester Resin

Description: Flexible polyester, flexible Orthophthalic unsaturated polyester resin

IK531 is a modification resin for improving flexibility or for decreasing shrinkage cure in many different applications as it is a very flexible resin when blended with more rigid resin systems, it dramatically improves the mechanical properties. which its very gradual cure it also helps to minimize , the excessive shrinkage in highly reactive system that may occur otherwise

Application: It is not recommended to use IK531 alone in reinforced applications as the resulting product may be too flexible. however, it may be used in filled casting applications especially where . low shrinkage flexibility and excellent electrical properties are needed

Curing : IK531 is fully compatible with all IK UP resins and pigment pastes .

.Typical properties of liquid resin

Property ^{*1}	Value
Acid Value	30 ± 2 mgr KOH/gr
Appearance	Clear liquid
Solid content	64 ± 3 %
Viscosity ^{*2}	400 - 450 cps
Specific gravity	1.05 - 1.1 gr/cm ³
Gel time ^{*3}	10 – 13 min
Time to Peak	22 - 28 min
Peak exotherm	120 ±5 min
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 strength	50 ± 5 MPa	ASTM D638
Tensile modulus	2.0 ~ 2.2 Gpa	ASTM D638
Tensile elongation	10 ~ 15 %	ASTM D638
Flexural strength	100 – 110 Mpa	ASTM D790
Flexural modulus	3.8 – 4.0 Gpa	ASTM D790
Volume shrinkage	0.5 – 1 %	ASTM D2566
HDT *5	50 ± 5 °C	ASTM D648
Barcol Hardness	35 ± 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 IK531 is blended with cobalt salt promoters shelf life will be shortened. promoted IK531 must be used within three months.
2. The gel time of IK531 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. IK531 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK531 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.