



## Polyester Resin IK 521

### Technical Data Sheet

**Product Name:** IK 521 general purpose Unsaturated Polyester Resin.

**Description and Application:** versatile rapid currying general purpose orthophthalic Unsaturated Polyester Resin with excellent mechanical properties and good electrical performance, Laminates prepared with IK 521 are resilient. Have high mechanical strength, good rigidity and excellent impact resistance together with a low water absorption rate. IK 521 is particularly suited for the manufacture of vehicle bodies, railway coaches' caravans, machine fairings and covers, boat building, making pipe, water tanks and moulds for cold curing GRP systems.

### Typical properties of liquid resin.

Property <sup>*1</sup>	Value
Acid Value	25±2 mgr KOH/gr
Appearance	Clear liquid
Solid content	64±2%
Viscosity <sup>*2</sup>	350-380cps
Specific gravity	1.05-1.1gr/cm <sup>3</sup>
Gel time <sup>*3</sup>	10-13min
Time to Peak	20-25min
Peak exotherm	125±5min
Shelf life	6 Month

\*1 : measurement was obtained under 25<sup>0C</sup>

\*2 : LVT# 3-60 rpm (@) 25<sup>0C</sup>

\*3 : cobalt 10% , 0.1 phr MEKP A 60 , 1.5% (@) 25<sup>0C</sup>



## TYPICAL CLEAR CASTING PROPERTIES OF CURED

PROPERTY	ST <sup>*4</sup>	TEST METHOD
Tensile strenght	60±5 MPa	ASTM D638
Tensile modulus	2.4 – 2.6 Gpa	ASTM D638
Tensile elongation	2-3%	ASTM D638
Flexural strength	100-120Mpa	ASTM D790
Flexural modulus	3.0-3.2Gpa	ASTM D790
Volume shrinkage	4-5%	ASTM D2566
HDT <sup>*5</sup>	73±5 °C	ASTM D648
Barcol Hardness	35±2	ASTM D2583

\*4 : ST values based on conversion

\*5 : cure condition for HDT 24 hours at room temperature then 2 hours at 105<sup>0C</sup>

### Notice in Use and storage:

1. If IK 521 is blended with cobalt salt promoters shelf life will be shortened. promoted IK 521 must be used within three months.
2. The gel time of IK 521 is affected primarily by catalyst concentration and temperature. The variation of cure characteristics may be caused by the variations of catalyst. Humidity pigment filers and other additives it is recommended that the fabricators check the cure characteristic with a small quantity resin before proceeding for bulk production.
3. IK 521 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK 521 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.