



Polyester Resin IK 521

Technical Data Sheet

Product Name: IK 521 general purpose unsaturated polyester resin.

Description and Application: versatile rapid currying general purpose orthophtalic unsaturated polyester resin with excellent mechanical properties and good electrical performance, Laminates prepared with IK521 are resilient. Have high mechanical strength, good rigidity and excellent impact resistance together with a low water absorption rate. IK521 is the refere particularly suited for the manufacture of vehicle bodies, railway coaches caravans, machine fairings and covers, bout building water tanks and moulds for cold curing GRP systems.

Typical properties of liquid resin.

Property ^{*1}	Value
Acid Value	25 ± 2 mgr KOH/gr
Appearance	Clear liquid
Solid content	62 ± 3 %
Viscosity ^{*2}	250 - 300 cps
Specific gravity	1.05 - 1.1 gr/cm ³
Gel time ^{*3}	10 - 13 min
Time to Peak	20 – 24 min
Peak exotherm	125 ± 5 °C
Shelf life	6 Month

*1 : measurement was obtained under 25^{0C}

*2 : LVT# 3-60 rpm (@) 25^{0C}

*3 : cobalt 10% , 0.1 phr MEKP A 60 , 1.5% (@) 25^{0C}



TYPICAL CLEAR CASTING PROPERTIES OF CURED

PROPERTY	ST ^{*4}	TEST METHOD
Tensile strength	60 ± 5 MPa	ASTM D638
Tensile modulus	2.4 - 2.6 Gpa	ASTM D638
Tensile elongation	2 - 3 %	ASTM D638
Flexural strength	110 – 120 Mpa	ASTM D790
Flexural modulus	3.0 - 3.2 Gpa	ASTM D790
Volume shrinkage	4 – 5 %	ASTM D2566
HDT ^{*5}	70 ± 5 °C	ASTM D648
Barcol Hardness	33 ± 2	ASTM D2583

*4 : ST values based on conversion

*5 : cure condition for HDT 24 hours at room temperature then 2 hours at 105^{0C}

Notice in Use and storage:

1. If IK521 is blended with cobalt salt promoters shelf life will be shortened. promoted IK521 must be used within three months.
2. The gel time of IK521 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. IK521 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK521 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.