



Polyester Resin IK 7000 RTM

Technical Data Sheet

Product Name: IK-7000 unsaturated polyester resin for RTM.

Description: Orthophthalic, reactive unsaturated polyester resin of low viscosity and perfect wetting specially designed for RTM applications.

Properties and Application: IK-7000 has been specially developed for the manufacture of close mould RTM applications.

With excellent wetting characteristics and specially optimized curing characteristics . It gives perfect results. Even in thickest parts to be produced via RTM.

Typical properties of liquid resin.

| Property ^{*1} | Value |
|-------------------------|-------------------------------|
| Acid Value | 20 - 25 mgr KOH/gr |
| Appearance | Clear liquid |
| Solid content | 65 ± 1 % |
| Viscosity ^{*2} | 200 - 250 cps |
| Specific gravity | 1.05 - 1.1 gr/cm ³ |
| Gel time ^{*3} | 5 – 7 min |
| Time to Peak | 10 - 15 min |
| Peak exotherm | 150 ± 5 min |
| Shelf life | 6 Month |

*1: Measurement was obtained under 25⁰C

*2: LVT# 3-60 rpm (@) 25 ⁰C

*3: Cobalt 10%, 0.1 phr MEKP A 60, 1.5% (@) 25⁰C



TYPICAL CLEAR CASTING PROPERTIES OF CURED

| PROPERTY | ST ^{*4} | TEST METHOD |
|--------------------|------------------|-------------|
| Tensile strength | 60 ± 5 MPa | ASTM D638 |
| Tensile modulus | 2.6 ~ 2.4 Gpa | ASTM D638 |
| Tensile elongation | 3 ~ 4 % | ASTM D638 |
| Flexural strength | 110 – 130 Mpa | ASTM D790 |
| Flexural modulus | 3.5 – 4.5 Gpa | ASTM D790 |
| Volume shrinkage | 3 – 4 % | ASTM D2566 |
| HDT ^{*5} | 70 ± 5 °C | ASTM D648 |
| Barcol Hardness | Min 42 | 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 IK7000 is blended with cobalt salt promoters shelf life will be shortened. promoted IK7000 must be used within three months.
2. The gel time of IK7000 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. IK7000 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK7000 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.