



## Polyester Resin IK 1502

### Technical Data Sheet

**Product Name :** IK 1502 for Hot moulding /SMC-BMC polyester

**Description :** very reactive orthophthalic unsaturated polyester resin

**Properties and application :** IK 1502 is a versatile hot moulding specially designed for use in SMC(sheet moulding compound) or BMC/ ( Bulk moulding compound)

Formulations it is highly reactive which makes it easily cured in hot moulding applications and shows good compatibility with LS (Low Shrinkage) and thickening components of compound formulations.

With its high filler loading capacity it gives excellent flow characteristics to pre mix as well as good storage stability properties.

Temperatures and good surface properties.

IK 1502 is also fully compatible with all pigment paste.

### Typical properties of liquid resin.

| Property <sup>*1</sup>          | Value                         |
|---------------------------------|-------------------------------|
| Acid Value                      | 20 - 25 mgr KOH/gr            |
| Appearance                      | Clear liquid                  |
| Solid content                   | 68 ± 2 %                      |
| Viscosity <sup>*2</sup>         | 800 - 1300 cps                |
| Specific gravity                | 1.05 - 1.1 gr/cm <sup>3</sup> |
| Gel time <sup>*3</sup> at 110°C | 20 – 25 min                   |
| Time to Peak                    | 5 - 7 min                     |
| Peak exotherm                   | 150 ± 5 °C                    |
| Shelf life                      | 6 Month                       |

\*1 : measurement was obtained under 250C

\*2 : LVT# 3-60 rpm (@) 250C

\*3 : Ter= butyl per benzoate 1 phr (a) 110°C .



## TYPICAL CLEAR CASTING PROPERTIES OF CURED

| PROPERTY           | ST <sup>*4</sup> | TEST METHOD |
|--------------------|------------------|-------------|
| Tensile strength   | 60 ± 5 MPa       | ASTM D638   |
| Tensile modulus    | 2.4 - 2.6 Gpa    | ASTM D638   |
| Tensile elongation | 1 - 2 %          | ASTM D638   |
| Flexural strength  | 100 – 120 Mpa    | ASTM D790   |
| Flexural modulus   | 3.2 – 3.4Gpa     | ASTM D790   |
| Volume shrinkage   | 3 – 4 %          | ASTM D2566  |
| HDT <sup>*5</sup>  | 80 ± 5 °C        | ASTM D648   |
| Barcol Hardness    | 42 ± 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 IK1502 is blended with cobalt salt promoters shelf life will be shortened. promoted IK1502 must be used within three months.
2. The gel time of IK1502 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. IK1502 contains organic solvent (styrene), keep away from heat sparks and flames.
4. IK1502 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.