

BUP 645

Unsaturated Polyester Resin

Orthophthalic Polyester Resin

Product Description:

BUP 645 is an un-promoted orthophthalic based unsaturated polyester resin with very low color, medium viscosity and good mechanical properties for ambient temperature cure with MEK peroxide.

Characteristics and Advantages:

- Very low color
- Good flexibility and transparency
- Good mechanical properties

Uses:

- Lacquer and electrical insulation applications

Technical Properties:

Physical data in liquid state at 25°C

These data are measured for each lot by our QC lab before its release.

| Properties | Unit | Value | Test method |
|-----------------------------|-------------------|----------|---------------|
| Appearance | NA | Clear | NA |
| Color | Gardner | Max 0.3 | ASTM D1544-98 |
| Viscosity (at 25°C) | mPa.s (cP) | 400-500 | ISO 2555 |
| Density (at 23°C) | g/cm ³ | 1.1446 | ASTM D1475 |
| Acid number | mg KOH/g | Max 26 | ASTM D1639 |
| Solid content | wt% | 64±2 | ASTM D1259 |
| Gel time* | min | 8-15 | ASTM D2471 |
| Curing time | min | 8-13 | ASTM D2471 |
| Peak exothermic temperature | °C | Max 190 | ASTM D2471 |
| Water absorption | wt% | Max 0.25 | ISO 62 |
| Flash point (open cup) | °C | 21 | ASTM D92 |

* Promoter: 0.5 g Cobalt (1%) in 100 g resin @25 °C

Initiator: 2 g MEKP (50%) in 100 g resin

Typical non-reinforced casting properties

These data are not subject to routine monitoring or part of the specifications; they are only reported for a better product description.

| Properties | Unit | Value | Test method |
|-----------------------------------|------|---------|-------------|
| Tensile strength | MPa | Min 40 | ISO 527-2 |
| Tensile elongation | % | 9.2 | ISO 527-2 |
| Tensile modulus | MPa | 415 | ISO 527-2 |
| Flexural strength | MPa | Min 70 | ISO 178 |
| Flexural modulus | MPa | 1410 | ISO 178 |
| Heat distortion temperature (HDT) | °C | Min 55 | ASTM D648 |
| Hardness (Barcol) | NA | Min 30 | ASTM D2583 |
| Linear shrinkage (ΔL/L) | % | Max 1.1 | ASTM D2566 |

Product safety and Environmental protection:

The usual protective measures employed during the handling of Unsaturated Polyester Resins should be observed. Further product safety information can be obtained from our Material Safety Data Sheet which is available on request.

Packaging: 225 kg (net) in steel drums

Storage: Store in a cool place below 25 °C and away from moisture and direct sunlight. Under above mentioned storage conditions, the shelf life of the resin will be at least 6 months ex-works.

Disclaimer: The information and in particular the recommendations relating to the application and use of Bonyan Kala Chemie products are given in good faith based on our current knowledge and expertise of the products when properly stored, handled and used under normal conditions within their shelf life. In practice, the differences in materials, chemistries and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed from www.bonyankala.com.