



Vasavibala Resins (P) Ltd.

POLYMER DIVISION
Manufacturers of Unsaturated Polyester Resins

TECHNICAL BROCHURE – UNSATURATED POLYESTER RESINS

GRADE : VBR 3405 – ORTHO ROOFLITE RESIN with UV

VBR 3405 is medium reactive, low viscous, orthophthalic resin designed for the production of finest translucent sheets. This resin shows good wetout and high spread, and is suitable for use in spray-up and hand lay-up application. UV stabilizer has been added to ensure non-yellowing and long-term colour stability.

| PROPERTIES OF LIQUID RESIN | |
|---|-----------------------------|
| Appearance | Pale yellowish clear liquid |
| Colour (on Gardner Scale, max) | 2 |
| Viscosity at 25°C, cP Brookfield Viscometer LV DV II + Pro Spindle 61, rpm 12 | 300 – 400 |
| Specific gravity at 25°C gm/ml | 1.11 – 1.12 |
| Acid value, mg KOH/gm | 20 – 24 |
| Volatile content, % | 36 – 38 |
| Shelf life at 25°C, months | 3 |
| Gel time at 25°C, minutes* | 20 – 30 |
| Peak exotherm, °C** | 160 – 170 |

* Mix VBR 3405 Resin - 100 gm, VBR 1201 – 1.5 ml, VBR 1204 - 1.5ml

** Under insulated Condition for 50 gm mixture.

Caution : VBR 1201 should never be independently mixed with VBR 1204, as this would cause explosion.

PROPERTIES OF UNREINFORCED CURED RESIN CASTING

The specimens are prepared by separately mixing 1.5% each of VBR 1201 and VBR 1204 with VBR 3405 and casted in a closed cell of specified dimension. These castings are cured for 24 hrs at room temperature and post cured at 90°C for 4 hrs.



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| PROPERTIES OF RESIN CASTING | |
|---|---------|
| Barcol Hardness | 35 – 40 |
| Tensile Strength, N/mm ² | 55 – 60 |
| Flexural Strength, N/mm ² | 80 – 90 |
| Heat distortion temperature, °C | 70 |
| Water Absorption at 25°C over a period of 700 hrs, % | <0.40 |
| Elongation at break, % | >3 |

TEST METHODS

IS 6746 – 1994.

APPLICATION

VBR 3405 is mainly used in translucent applications such as FRP articles, decorative castings, and tabletops, biological encapsulations and translucent sheets.

STORAGE

VBR 3405 should be stored in closed containers inside covered area. The storage temperature not exceeding 25°C is preferable. At higher storage temperature, the shelf life decreases sharply. It should not be exposed to direct sunlight, heat radiation and moisture; these may cause premature gelation. VBR 3405 is guaranteed for 3 months from the date of manufacture provided the storage conditions are strictly adhered to.

PACKING

35 Kg. HDPE carbuoys and 220 Kg. coated steel barrels.