



# Vasavibala Resins (P) Ltd.

POLYMER DIVISION  
Manufacturers of Unsaturated Polyester Resins

## TECHNICAL BROCHURE – UNSATURATED POLYESTER RESINS

### GRADE : VBR 4505 S –ISO POLYMER CONCRETE RESIN

VBR 4505S is a medium reactivity Isophthalic based on polymer concrete products. This resin shows good wet out and rapid trim times in open mould process. This resin is suitable for use in hand lay-up applications. It resists impact and thermal cracking.

#### PROPERTIES OF LIQUID RESIN

Appearance	Clear to pale yellowish liquid
Viscosity at 25° C, cP (Brookfield Viscometer LV DV II + Pro Spindle 63, rpm 100)	200 – 300
Specific gravity at 25° C	1.09 – 1.11
Acid value, mg KOH/gm	12 – 16
Volatile content, %	40 – 44
Shelf life at 25° C, months	3
Gel time at 25° C, minutes*	10 – 20
Peak exotherm, °C**	170 – 180

\* Mix VBR 4505 S Resin - 100 gm, VBR 1206 – 2 ml, VBR 1205 - 3 g

\*\* Under insulated Condition for 100 gm mixture.

.

#### PROPERTIES OF UNREINFORCED CURED RESIN CASTING

The specimens are prepared by separately mixing 2 ml of VBR 1206 and 3g VBR 1205 with VBR 4505 S 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.



# Vasavibala Resins (P) Ltd.

POLYMER DIVISION  
Manufacturers of Unsaturated Polyester Resins

## PROPERTIES OF RESIN CASTING

Barcol Hardness	38
Tensile Strength, MPa	> 50
Flexural Strength, MPa	> 110
Heat distortion temperature, °C	80 - 90
Water Absorption at 25°C over a period of 700 hrs, %	< 0.3
Elongation at break, %	2 – 2.5

## TEST METHOD

IS 6746 – 1994.

## APPLICATION

VBR 4505 S is suitable for polymer concrete applications.

## STORAGE

VBR 4505 S 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 4505S 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.