



TECHNICAL BROCHURE – UNSATURATED POLYESTER RESINS

GRADE: VBR 4524 – Iso Encapsulation Resin with UV

VBR 4524 is a low reactive isophthalic acid based polyester resin, suitable for high performance electrical encapsulations. This resin exhibits excellent chemical and weather resistance along with good flexural and electrical properties.

PROPERTIES OF LIQUID RESIN

Appearance	Pale yellowish to yellow colour clear liquid
Viscosity at 25°C, cP or mPa.s (Brookfield Viscometer LV DV II + Pro Spindle 63, rpm 50)	400 – 600
Specific gravity at 25°C gm/ml	1.110 - 1.130
Acid value, mg KOH/gm	12 – 20
Volatile content, %	32 – 38
Shelf life at 25°C, months	3
Gel time at 25°C, minutes*	16 - 24
Peak exotherm, °C**	140 - 150

* Mix - VBR 4524 - 100 gm, VBR 1201 - 1.5ml, VBR 1204 - 1.5 ml

** Under insulated condition for 100 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 4524 and casted in a closed cell of specified dimension. These castings are cured for 24 hrs at room temperature and post curing at 90°C for 4 hrs.



Vasavibala Resins (P) Ltd.

POLYMER DIVISION
Manufacturers of Unsaturated Polyester Resins

PROPERTIES OF RESIN CASTING	
Hardness (Barcol)	30 - 35
Tensile strength, N/mm ²	50 – 55
Flexural strength, N/mm ²	80 - 90
Heat distortion temperature, °C	80 – 85
Water absorption at 25°C over a period of 700 hrs, %	0.32 – 0.33

CHEMICAL RESISTANCE

Castings of VBR 4524 show a good resistance to most acids at ambient temperature. It resists petroleum products, oils, salt solution etc. It shows poor resistance towards strong oxidizing acids and alkalis.

THERMAL STABILITY

Castings of VBR 4524 shows better dry heat stability than orthophthalate resins.

TEST METHODS

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STORAGE

VBR 4524 should be stored in closed containers inside covered area. The storage temperature not exceeding 30°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 4524 is guaranteed for 3 months from the date of manufacture provided the storage conditions are strictly adhered to.

PACKING: 35 kg HDPE carboys and 220 kg coated steel barrels.