



Vasavibala Resins (P) Ltd.

POLYMER DIVISION

Manufacturers of Unsaturated Polyester Resins
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TECHNICAL BROCHURE - UNSATURATED POLYESTER RESIN

GRADE : VBR 5601 – Ortho FR RESIN with Halogen

VBR 5601 is a versatile medium reactive orthophthalic based fire retardant polyester resin designed for hand lay-up operations. It can be used in a wide range of applications where fire retardant performance is needed. This resin contains inorganic fillers with halogen to give excellent fire retardant properties, with reference to IS 6746 - 1994, Type - 1.

PROPERTIES OF LIQUID RESIN		
Appearance	:	whitish opaque liquid
Viscosity at 25°C, cps(Brookfield Viscometer LV DV II + Pro Spindle 62, rpm 30)	:	600 –900
Specific gravity at 27°C	:	1.240 - 1.260
Acid value, mg KOH/gm	:	14 - 22
Volatile content, %	:	30 - 36
Shelf life at 25°C, months	:	3
Gel time at 25°C, min*	:	10 - 20
Fire Retardant time Annex N Type I	:	<10

* Mix VBR 5601 Resin -100 gm, VBR 1201 - 1.5 ml, VBR 1204 - 1.5 ml.

** Under insulated condition for 100 gram 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 5601 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.

PROPERTIES OF RESIN CASTING		
Hardness (Barcol)	:	30 –35
Tensile strength, N/mm ²	:	38-42
Flexural strength, N/mm ²	:	85-90
Heat distortion temperature, °C	:	65
Water absorption at 25°C over a period of 700 hrs, %	:	0.50
Elongation at break, %	:	>2

TEST METHODS

IS 6746 – 1994.

APPLICATION

VBR 5601 is recommended for wide range of applications where fire retardant performance is significant along with good mechanical characteristics.

STORAGE

VBR 5601 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 5601 is guaranteed for 3 months from the date of manufacture provided the storage conditions are strictly adhered to.

PACKING

35kg HDPE carbuoys and 220 kg steel coated barrels.