

ORTHO HALOGENATED

PRODUCT TECHNICAL DATA

Ortho halogenated FR is a semi rigid, medium reactivity Orthophthalic based Thixotropic, pre accelerated fire-retardant (O-Thixo PA FR) resin designed for special * Post cured results TS- Test Standards jobs to fabricate engineering equipment/components for exterior applications like Automobile components, cooling tower, chimney and coating over fabricated M.S Structures, (after proper preparation) with fibreglass for resistance against corrosion in salt water, heat resistance and fire retardancy complying to self extinguishing behaviour as per IS-6746 Type IV & V and IS-15502.

GLASS FIBRE REINFORCED PLASTICS PRODUCTS:

Automobile components/cooling tower, chimney

PHYSICAL DATA IN LIQUID STATE AT 25°C# [Confirm to IS 6746-1994 and BS 3532-1990]

Properties	Unit	Value	TM
Appearance	-	Opaque White	TM-31
Specific Gravity.	-	1.25 ± 0.05	TM-11
Viscosity -Ford Cup 4 @ 30°C	seconds mPa	170 ± 20	TM-04
-Brookfield RVT model#	s(cP)	750 – 850	TM-05
Acid Value	mg. KOH/gm	25± 3	TM-06
Volatile Content	%	35± 2	TM-08
Geltime @ 25°C *	Minutes	18-25*	TM-07
	Minutes	12-15 ^ω	TM-07
Peak Exotherm Temp.	°C	120 – 140	TM-07
Stability in the Dark	Months	3	TM-15

* Using Accelerator, Co (2%) 1 ml, Catalyst, MEKP 1.5ml, the gel time, cure time and Peak Exotherm measured.

Packing: Regularly available 35 Kgs (Carboys)
220 Kgs (Drums/Barrel)

USAGE & POST CURING

* The Orthophthalic polyester resin performs best if the laminate is completely post cured.

The quantity of catalyst and accelerator can be adjusted to get a shorter or longer geltime.

* It is recommended to mature the products for 24 hours and post curing should be done for minimum of six hours at 80 deg centigrade. This is recommended for getting the optimum properties.

PROPERTIES OF CAST RESIN LAMINATE (on base resin)

Properties	Units	Results	TS
a) Barcol Hardness	BHU	35*	ASTM D – 2583
b) Heat Distortion Temp.	°C	65	ISO 75
c) Specific Gravity	-	1.35± 0.02	IS 6746
d) Volume Shrinkage on cure	%	7 – 8	Sp.Gr. method
e) Tensile Strength	N/sq.mm	45 - 55	ISO – 527
f) Tensile Modulus	N/sq.mm	2800 -3000	ISO – 527
g) Elongation at break	%	1.5 – 2.0	ISO – 527
h) Flexural Strength	N/sq.mm	80-100	ISO – 178
i) Flexural Modulus	N/sq.mm	2800-3000	ISO – 178

APPLICATION METHODS	<input type="radio"/> Optional	<input checked="" type="radio"/> Yes
Hand lay-up		<input checked="" type="radio"/>
Spray-up	<input type="radio"/>	
Filament Winding		
Continuous Laminating		
Casting	<input type="radio"/>	
Resin Transfer Moulding		
Cold Press		
Hot Press (Sheet - Bulk Moulding Compound)		
Pultrusion (Profile)		
Other	<input type="radio"/>	

CHEMICAL STRUCTURE		<input type="radio"/> Optional	<input checked="" type="radio"/> Yes
Acid	Phthalic	Acceleration	-
Glycol	Standard glycol	Reactivity	Medium
Modification	FR	Grade/Versions	

Revision	Description	Date
ISO- 9001- 2008 Rev-00	Ortho Halogenated FR	16.08.2010



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