



# TECHNICAL DATA SHEET

## GENERAL PURPOSE ORTHO PHTHALIC POLYESTER RESIN FOR USE IN TROPICAL CLIMATE LAFFAN – GP 600 TC

### General Description:

**LAFFAN – GP 600 TC** Polyester Resin is a non-accelerated, non-thixotropic, General Purpose Ortho phthalic based polyester resin for use in Tropical Climate.

### Applications and Uses:

**LAFFAN – GP 600 TC** used to manufacture Boats/Water Tanks/ Pre-Fab Cabins/ Bath Tubs/potting & chokes and reinforced plastics etc. (Formulated also to use in tropical climate)

### Processing:

Contact Moulding / Cold Curing

### Typical Properties for LAFFAN – GP 600 TC:

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Appearance	-	-	Clear viscous liquid
2	Colour			
3	Stability at 25 °C in the dark from date of production	-	months	3
4	Viscosity at 25°C Brookfield viscometer LV SP3,RPM 60	ISO 2555:2018	mPa.s	600-800
5	Specific Gravity at 25°C	ASTMD 1475	g/mL	1.0-1.20
6	Acid Value (on solution)	ISO 2114:2000	mg KOH/g	Max. 25
7	Volatile-matter content (1gm/110°C/1hr)	ASTMD 1644-88	%	32-38
8	Gel Time @ 25°C 100g+0.2g co 6%+ 2gm Butanox M50	ASTM D2471-99	Minutes	10-15
9	Curing Time		Minutes	20-25
10	Peak Exothermic Temperature		°C	Min.150

Note :Properties can be adjusted based on the customer's requirements.

### Contacts us:

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Table 2: Specification of Cured Resin

No.	Property	Test Method	Unit	Value
1	Tensile Strength	ISO 527-1:2019 ISO 527-2: 2012	MPa	63-65
2	Tensile Modulus		MPa	3500
3	Elongation at break		%	2.0
4	Flexural Strength	ISO 178:2019	MPa	120
5	Flexural Modulus		MPa	3500
6	Barcol Hardness	ASTM D 2583-13a (934-1)	-	40-42
7	Heat Deflection Temperature † (1.80 MPa)	ISO 75-1:2020 ISO 75-2:2013 Method A	°C	67

Note :Properties can be adjusted based on the customer's requirements.

Casting Preparation formula: Resin 100% + Co 6% 0.25%+ MEKP M50 1.5%

Curing cycle: 24 hrs at 25°C+6 hrs 85°C +24 hrs at 25°C

#### Shelf life and Storage:

To ensure maximum stability and maintain resin properties within the desirable range, UPR should be stored in closed containers at temperatures below 25 °C, and away from heat sources such as, but not limited to, direct sunlight, steam pipes or furnaces. Under proper storage conditions the minimum shelf-life performance is estimated at six months, provided that the product is stored in the original, unopened container. Shelf life decreases with increasing storage temperature, or when it is kept near a heat source or direct sunlight.

#### Typical Curing Characteristics and Recommendations

Resin (g)	Accelerator	Catalyst	Temperature °C	Gel Time minutes	Peak Exothermic
100g	Cobalt octoate 6% :- 0.25%	Butanox M50 2%	25 °C	10-20	140°C - 210°C

Note :Properties can be adjusted based on the customer's requirements.

LAFFAN – GP 600 TC Should be processed at room temperature (18-25°C) . Lower temperature have an adverse effect om proper curing . Especially when stored in the presence of air ,there may be an increase in the gel time ,although this can be compensated by increasing the amount of curing agent.

#### Standard Packaging:

The standard packaging available are standard intermediate bulk containers (IBC), 220 kg stainless steel drums and trailer tanks. However, UPR can be packaged in different quantities. as per the request of the customer.

**Dot Label Required: Flammable Liquid**

#### Precaution for handling:

Laffan Resin Production Factory (LRPF) maintains and regularly updates the Material Safety Data Sheet (MSDS) of all its products. All supervisory personnel and employees expected to be working with the resin must be provided with the MSDS. Due attention should be given to the precautions for handling chemicals provided in the MSDS prior to any use of this product.

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