



# TECHNICAL DATA SHEET

## GENERAL PURPOSE RESIN

### LRF GP-L500 TP

#### General Description:

**LRF GP-L500 TP** is a thixotropic, non-accelerated and medium reactive unsaturated polyester resin . The resin is based on phthalic anhydride with good lamination Properties .

#### Special Applications :

The raw materials used in the manufacture of the resins stated below are listed as acceptable in FDA regulation Title 21 CFR 177.2420 for repeated use in contact with food, subject to the user's compliance with the prescribed limitations of that regulations.

#### Applications and Use

**LRF GP-L500 TP** series resins can be used for hand lay-up and spray-up applications such as fabrication of fume hoods and ducts, moulding , tanks, pipe, storage tank repairs , Sanitary wares, Bathtubs, sinks, Fishing boats m Pleasure Boats , Water scooters and slides, cabins, ..etc.

#### Typical Properties for LRF GP-L500 TP:

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Visual appearance	-	-	Pinkish viscous liquid
2	Viscosity at 25°C ( RVT SP2 , Rpm 20 )	ISO 2555:2018	mPa.s	500-750
3	Flash Point	ASTMD 3278-74	°C	34
4	Storage stability	-	Months	6
5	Specific Gravity at 25°C	ISO 2811-1974	g/cc	1.13-1.13
6	Acid Value	ISO 2114:2000	mg KOH/g	20-30
7	Styrene content	ISO 3251:2019	%	38-43
8	Gel Time @ 30°C	ASTM D2471-99 ISO 2535:2001	Minutes	8-15
9	Peak Exothermic Temperature		°C	160-180
10	VOC Volatile organic compound	-	gms/ltr	500-750

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

#### Contacts us:

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No.	Property	Test Method	Unit	Pure Resin	Reinforced Sheet
1	Tensile Strength	ISO 527-1:2019 ISO 527-2: 2012	MPa	Min 50	Min.80
2	Tensile Modulus		MPa	Min 3000	Min 6000
3	Elongation at break		%	Max 2.5	Max 2.0
4	Flexural Strength	ISO 178:2019	MPa	Min 80	Min.120
5	Flexural Modulus		MPa	Min 3000	Min 6000
6	Barcol Hardness	ASTM D 2583-13a (934-1)	-	Min 40	Min 45
7	Volume Shrinkage	-	%	7	-
8	Heat Deflection Temperature † (1.80 MPa)	ISO 75-1:2020 ISO 75-2:2013	°C	70-80	-

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

#### 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 Temperature °C
100g	Cobalt 10% -0.15 %	MEKP 50% (Butanox M50) – 1.5%	25 °C	9:30-11:00	160-180

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

**LRF GP-L500 TP** 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 for 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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