



TECHNICAL DATA SHEET

GENERAL PURPOSE LAMINATING RESIN LAFFAN TP500

General Description:

LAFFAN TP500 is a pre-accelerated, thixotropic Ortho phthalic unsaturated polyester resin, with low styrene emission. Its rapid impregnation of glass fiber reinforcements, and low exotherm temperature, make it ideal for multi-layer laminates, in spray or hand lay applications.

LAFFAN TP500 exhibits reduced exothermic heat on curing. This makes it suitable for the construction of thicker laminates. where exothermic heat buildup may distort the moulding or cause excessive shrinkage.

Applications and Uses:

LAFFAN TP500 is specifically designed to deliver superior surface aesthetics and provide a proven resin system that reduces VOC emissions when compared to standard Ortho phthalic resin.

LAFFAN TP500 is non -air inhibited and cures tack free when properly initiated ,making it ideal for use in fiber glass repair.

Water applications; including boats, yachts, and water tanks. Will suit all general-purpose base applications.

Advantages

- Low shrinkage.
- Low styrene emissions.
- Long pot life, ease of useability.
- Low wax content to ease sand ability.

Moulding Information:

- Hand lay up
- Spray up

Typical Properties for LAFFAN TP500:

| Table 1: Specification of Liquid Resin | | | | |
|--|-----------------------------------|--------------------------------|----------|----------|
| No. | Property | Test Method | Unit | Value |
| 1 | Viscosity at 25°C (LV SP3 RPM6) | ISO 2555:2018 | mPa.s | 850-1000 |
| 2 | Viscosity at 25°C (LV SP3 RPM60) | ISO 2555:2018 | mPa.s | 450-550 |
| 3 | Thi Index LV2 6/60 | - | - | 1.6-2.5 |
| 4 | Density at 23°C | ISO 1675:2022 | g/mL | 1.1-1.16 |
| 5 | Acid Value | ISO 2114:2000 | mg KOH/g | 10-25 |
| 6 | Solid content | ISO 3251:2019 | % | 56-60 |
| 7 | Gel Time @ 25°C | ASTM D2471-99 ISO 2535:2001 | Minutes | 22-28 |
| 8 | Peak Exothermic Temperature | | °C | 170-210 |

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

Contacts us:

Light Industrial Area, street # 709, Zone No: 92, Mesaieed
Industrial zone, Qatar PO Box: 1985. T: (+974) 445 09433, E:
info@lrf.com.qa
Factory Manager M: (+974) 55828142
Technical Inquiries:+974 74025490





| No. | Property | Test Method | Unit | Value |
|-----|---|-----------------------------------|------|----------|
| 1 | Tensile Strength | ISO 527-1:2019 ISO 527-2: 2012 | MPa | Min 65 |
| 2 | Tensile Modulus | | MPa | Min 3200 |
| 3 | Elongation at break | | % | Max 2.0 |
| 4 | Flexural Strength | ISO 178:2019 | MPa | Min 100 |
| 5 | Flexural Modulus | | MPa | Min 3200 |
| 6 | Barcol Hardness | ASTM D 2583-13a (934-1) | - | Min 40 |
| 7 | Heat Deflection Temperature † (1.80 MPa) | ISO 75-1:2020 ISO 75-2:2013 | °C | Max. 69 |

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) | Catalyst | Temperature °C | Gel Time minutes | Peak Exothermic |
|-----------|----------------|----------------|------------------|-----------------|
| 100g | Butanox M50-2g | 25 °C | 22-28 | 170-210 |

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

LAFFAN TP500 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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