



TECHNICAL DATA SHEET

UNSATURATED ORTHOPHTHALIC POLYESTER RESIN LAFFAN O-250

General Description:

LAFFAN O-250 is a non-accelerated , fast cure, resilient polyester for use where high filler loading are needed. The raw materials used in the manufacture of this resin are listed as acceptable in FDA regulation Title 21 CFR 177.2420 for repeated use in contact with food subject to user's compliance with the prescribed limitations of that regulations.

Applications and Uses:

Due to its good overall handling and mechanical properties , Ortho phthalic resin is used with great success in the following industrial applications .

- General Purpose polyester resin
- Polymer concrete products
- Tiles for roofs
- Sanitary products
- GRP,FRP and RTRP pipes
- Decorative works
- FRP Tanks
- FRP Tabletops
- Pultrusion products
- Marine applications
- Synthetic Marble
- Polyester Buttons
- Gelcoats,

Moulding Information:

Casting, contact mouldings.

Typical Properties for LAFFAN O-250 :

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Appearance	-	-	Clear viscous Colour liquid
2	Colour	-		
3	Storage Stability:- LRPOL022-O can be stable from date of production, when this product stored in original containers away from sunlight and heat at no more than 77°F/25°C.	-	Months	6
4	Viscosity at 23°C Brookfield viscometer RVT NO 3 RPM 50	ISO 2555:2018	mPa.s	230-290
5	Specific Gravity at 25 °C	ASTMD 1475	g/mL	1.08-1.16
6	Acid Value	ISO 2114:2000	mg KOH/g	<30
7	Solid Content (1gm/110°C/1hr)	ASTMD 1644-88	%	58-62
8	Gel Time @ 25°C 100g Resin + Co 1% 1.2%+ MEKP M50 1.5 %	ASTM D2471-99	Minutes	8-13
9	Curing Time		Minutes	20-28
10	Peak Exothermic Temperature		°C	140-170

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	Min 65
2	Tensile Modulus		MPa	Min 3900
3	Elongation at break		%	Min 2
4	Flexural Strength	ISO 178:2019	MPa	Min 125
5	Flexural Modulus		MPa	Min 3900
6	Barcol Hardness	ASTM D 2583-13a (934-1)	-	Min 45
7	Heat Deflection Temperature † (1.80 MPa)	ISO 75-1:2020 ISO 75-2:2013 Method A	°C	Min 6

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 1% :- 1.2g	Butanox M50 – 1.5g	25 °C	8-13	140°C - 170°C

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

LAFFAN O-250 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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