



TECHNICAL DATA SHEET

UNSATURATED DCPD POLYESTER RESIN LRPOL022-DCPD

General Description:

Unsaturated DCPD polyester resin (LRPOL022-DCPD) is a low profile, low shrink, DCPD, unsaturated polyester laminating resin. This resin is un promoted and formulated to be initiated with MEKP only.

LRPOL022-DCPD is designed to have ,

- Low volumetric shrinkage.
- Easy rolling
- Excellent glass fiber wet out.
- It is suitable for the production of thick parts .
- Its high thixotropic feature prevents the product from flowing when applied on vertical surfaces.

Applications and Uses:

LRPOL022-DCPD is suitable for marine , transportation , building and construction industries.

Moulding Information:

- Hand lay up
- Spray up

Typical Properties for Ortho phthalic Resin:

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Viscosity at 25°C (LV3 , Rpm 30 , 60sec)	ISO 2555:2018	mPa.s	400-600
2	Density at 23°C	ISO 1675:2022	g/mL	1.05-1.10
3	Thixotropy	-	-	3.0-3.5
4	Non-volatile-matter content	ISO 3251:2019	%	55-59
5	Gel Time @ 25°C	ASTM D2471-99 ISO 2535:2001	Minutes	20-25
6	Gel to Peak Time		Minutes	6-14
7	Peak Exothermic Temperature		°C	140-210

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	50-60
2	Tensile Modulus		MPa	3000-4000
3	Elongation at break		%	1.0-3.0
4	Flexural Strength	ISO 178:2019	MPa	100-120
5	Flexural Modulus		MPa	3000-3500
6	Barcol Hardness	ASTM D 2583-13a (934-1)	-	30-40
7	Water absorption in 24hrs	ISO 62:2008	%	0.1-0.3
8	Volumetric Shrinkage	ISO 3521:1997	%	4.0-8.0
7	Heat Deflection Temperature † (1.80 MPa)	ISO 75-1:2020 ISO 75-2:2013	°C	75-85

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
100g	Cobalt octoate 6% :- 0.15% -0.30%	Butanox M50/60 1% - 2%	25 °C	10-20	140°C - 210°C
100g	Cobalt octoate 1% :- 1% - 2%	Butanox M50/60 1% - 2%	25 °C	10-20	140°C - 210°C

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

LRPOL022-DCPD 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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