



TECHNICAL DATA SHEET

ISOPHTHALIC NEOPENTYL GLYCOL UNSATURATED POLYESTER RESIN LRPOL022-NPG

General Description:

LRPOL022-NPG is an acrylic modified, UV stabilized, high quality isophthalic neopentyl glycol unsaturated polyester resin. **LRPOL022-NPG** has been developed specifically for the casting of Solid Surface where the applications can range from sanitary ware to vanity units to worktops. **LRPOL022-NPG** is a low colour, polyester resin designed to accept the maximum level of Filler i.e. Aluminium Trihydride (ATH) and coloured chips or ground natural stone.

Applications and Uses:

The Solid Surface applications at present using the **LRPOL022-NPG** are high performance, sanitary ware, vanity units, and worktops in kitchens, bathrooms and commercial premises including fast food restaurants, pubs, offices and airports.

- Excellent mechanical strength.
- High HDT.
- Outstanding durability

Moulding Information:

- Hand lay up
- Spray up
- Filament Winding

Typical Properties for LRPOL022-NPG:

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Viscosity at 25°C (LV2 , Rpm 30 , 60sec)	ISO 2555:2018	mPa.s	300-500
2	Density at 23°C	ISO 1675:2022	g/mL	1.1-1.16
3	Acid Value	ISO 2114:2000	mg KOH/g	15-25
4	Non-volatile-matter content	ISO 3251:2019	%	Min 55%
5	Gel Time @ 25°C	ASTM D2471-99 ISO 2535:2001	Minutes	10-20
6	Gel to Peak Time		Minutes	8-16
7	Peak Exothermic Temperature		°C	160-195

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

Contacts us:

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No.	Property	Test Method	Unit	Value
1	Tensile Strength	ISO 527-1:2019 ISO 527-2: 2012	MPa	50-70
2	Tensile Modulus		MPa	3200-3600
3	Elongation at break		%	4.0-5.0%
4	Flexural Strength	ISO 178:2019	MPa	70-90
5	Flexural Modulus		MPa	3200-3600
6	Barcol Hardness	ASTM D 2583-13a (934-1)	-	35-45
7	Heat Deflection Temperature † (1.80 MPa)	ISO 75-1:2020 ISO 75-2:2013	°C	85-95

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	170°C - 210°C
100g	Cobalt octoate 1% :- 1% - 2%	Butanox M50/60 1% - 2%	25 °C	10-20	170°C - 210°C

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

LRPOL022-NPG 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, UIPR 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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