



TECHNICAL DATA SHEET

UNSATURATED POLYESTER MARBLE RESIN LRPOL022-M400

General Description:

LRPOL022-M400 is a pre-promoted, non-thixotropic, Ortho phthalic polyester casting resin that is formulated for room temperature gel and cure with methyl ethyl ketone (MEKP) initiator. It was developed for use with calcium carbonate and aluminum trihydrate fillers.

Applications and Uses:

LRPOL022-M400 has been designed especially for the production of filled castings, polyester concrete and composite stone.

Advantages

Features

Low viscosity
Low shrinkage
Fast curing

Benefits

High filler content
Possibility to cast large mouldings
Fast mould turn round, high production rate.

Suggested Applications

- Cultured marble/onyx vanities
- Back splashes
- Low color wall panels
- Shower pans
- Bathtubs

Typical Properties for LRPOL022-M400 :

Table 1: Specification of Liquid Resin				
No.	Property	Test Method	Unit	Value
1	Viscosity at 25°C (LV2 , Rpm 30 , 40sec)	ISO 2555:2018	mPa.s	250-350
2	Density at 23°C	ISO 1675:2022	g/mL	1.1-1.16
3	Acid Value	ISO 2114:2000	mg KOH/g	<30
4	Styrene content	ISO 3251:2019	%	35%
6	Gel Time @ 25°C	ASTM D2471-99 ISO 2535:2001	Minutes	15-20
7	Gel to Peak Time		Minutes	10-15
8	Peak Exothermic Temperature		°C	150-180

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	Min 65
2	Tensile Modulus		MPa	Min 3600
3	Elongation at break		%	Max 1.9
4	Flexural Strength	ISO 178:2019	MPa	Min 100
5	Flexural Modulus		MPa	Min 3900
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. 105

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 /DDM-9 1.5% -2.0%	25 °C	15-20	150°C - 180°C

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

LRPOL022-M400 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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