POLYPLEX-LS LAMINATING RESIN

Technical Datasheet

PRODUCT CODE: C240109

POLYPLEX–LS LAMINATING RESIN is an unsaturated polyester resin based on terephthalic acid and neopentyl glycol. POLYPLEX–LS LAMINATING RESIN has been specially developed as a low styrene content laminating resin for applications which requires good chemical and water resistance properties which makes it the ideal choice for swimming pools environments.
POLYPLEX–LS LAMINATING RESIN also contains a combination of additives which improve the working environment during and after application by substantially reducing styrene evaporation, while providing excellent inter-laminar adhesion characteristics after delayed lay-up. POLYPLEX–LS LAMINATING RESIN is supplied pre-accelerated and thixotropic and is designed for both hand lay-up and spray-up processes.

FEATURES

- Pre-accelerated
- Low styrene content
- Good chemical and water resistance
- Low styrene emission properties
- Thixotropic
- Good mechanical properties
- Colour change mechanism

BENEFITS

- Require only the use of MEKP catalyst to start the curing process
- 13 to 15% lower styrene content compared to typical laminating resins
- Can be used in demanding water and chemical environments
- Meets the health and safety requirements
- Minimises drainage along vertical surfaces
- The finished part is able to withstand the stresses and forces applied onto it
- Indicates presence of initiator.

ADDITIONAL INFORMATION

When a laminate is built up in stages with intermediate curing, each operation should be finished with a normal resin/glass fibre ratio. Excellent inter-laminar adhesion properties have been demonstrated with POLYPLEX–LS LAMINATING RESIN following delays between lay-ups of up to 3 days.

However, since conditions vary from workshop to workshop, the intervals between successive laminating operations should not exceed 72 hours unless the surface is abraded (to ensure optimum secondary bonding). Any areas with an excess of resin should be abraded in any case if further laminates are to be applied.

APPLICATION GUIDELINES

POLYPLEX–LS LAMINATING RESIN is supplied pre-accelerated and requires only the addition of a catalyst to start the curing cycle. The recommended catalyst for POLYPLEX–LS LAMINATING RESIN is MEKP NR20 or equivalent and as a guide the following mixing ratios should be used:

Item	Quantity
POLYPLEX–LS LAMINATING RESIN	100 parts
MEKP NR20	1.0 – 2.0 parts on weight of resin

TYPICAL LIQUID RESIN PROPERTIES

PROPERTY	TYPICAL VALUE
Appearance	Hazy Blue Liquid
Viscosity @ 25°C, centipoise	500 - 700
Geltime@ 25°C 1.5% NR 20 on weight, minutes	35 - 45
Solids Content	55 - 60
Shelf Life @ambient temperature, stored away from any heat sources and sunlight	6 months

Typical values: Based on materials tested in our laboratories, but varies from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

TYPICAL CAST UNFILLED RESIN PROPERTIES

PROPERTY	TYPICAL VALUE	TEST DETAIL
Heat Deflection	90°C	ISO 175
Barcol hardness (934-1)	40	ASTM D 258
Tensile Properties: Tensile Strength Elongation at break	64 MPa 3.0%	ISO 527-2
Flexural Properties: Flexural Strength	126 MPa	ISO 178

Cured at room temperature for sixteen hours then post cured for two hours at 80°C, then 2 hours at 120°C.

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, polyester resins should be stored in closed containers, away from heat sources and sunlight. The resin should be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the resin before use is recommended

STANDARD PACKAGING

Haztainers (1000kg)

Always refer to the MSDS before use.

Disclaimer: allnex Group companies ('allnex') exclude all liability with respect to the use made by anyone of the information contained herein. The information contained herein represents allnex's best knowledge but does not constitute any express or implied guarantee or warranty as to the accuracy, the completeness or relevance of the data set out herein. Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of allnex or of any third party. The information relating to the products is given for information purposes only. No guarantee or warranty is provided that the product and/or information is suitable for any specific use, performance or result. Any unauthorized use of the product or information may infringe the intellectual property rights of allnex, including its patent rights. The user should perform his/her own tests to determine the suitability for a particular purpose. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights or misappropriation of trade secrets of allnex and/or third parties remain the sole responsibility of the user.
Notice: Trademarks indicated with ®, TM or * as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands B.V. or its directly or indirectly affiliated allnex Group companies. ©2020 allnex Group. All Rights Reserved.