

NEOTECH INSPECTION & CHEMICAL CO., LTD.
บริษัท นีโอเทค อินสเปคชั่น แอนด์ เคมีคัล จำกัด

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PRO-CHEME 922 LTN

GENERAL PURPOSE POLYESTER LAMINATING RESINS

A. DESCRIPTION

PRO-CHEME 922 LTN is a thixotropic, orthophthalic unsaturated polyester resin with a medium reactivity. The pre-accelerated resin is specially suited for contact mouldings where fire retardancy is important.

B. APPLICATIONS

PRO-CHEME 922 LTN is a white resin with a good cure rate . The resin has achieved class 2 Surface Spread of Flame conforming to BS 476 Part 7 and is halogen free. The good wet out of glass fibre enables low resin resin ratios to be achieved.

C. SPECIFICATIONS

Liquid PRO-CHEME 922 LTN polyester has the following characteristics:

Appearance	White
Viscosity at 30 °C(Brookfield LVT, spindle 3, 60 rpm)	4-8 poises
Gel Time at 30 °C	9-15 minutes
Peak Exothermic Temperature	120 °C-140 °C
Stability in Dark below 25 °C	3 months

Above gelatin characteristics determined using **1% v/w of MEKP** catalyst(Butanox M-50) on 20g of resin.

D. PROPERTIES

Pure Resin Casting of PRO-CHEME 922 LTN polyester resin

Water Absorption(7 days value)	0.35%	(Test Method ISO-62-1980)
Barcol Hardness	48	(Test Method ASTM D2583-67)
Heat Distortion Temperature	67.3 °C	(Test Method ASTM D648-72)
Elongation at Break	3.20%	(Test Method ASTM D638-72)
Specific Gravity of Liquid Resin at 25 °C	1.13 kg/litre	(Test Method ASTM D1475)
Volume Shrinkage on Cure	9%	(Test Method Specific Gravity)
Volatile Content	35.60%	(Test Method ASTM D3030)
Flexural Strength	8.4 Kgf/mm ²	(Test Method ASTM D790)
Flexural Modules	536.1 Kgf/mm ²	(Test Method ASTM D790)
Tensile Strength	3 Kgf/mm ²	(Test Method ASTM D638)
Impact Strength	3.9 Kgf-cm/cm	(Test Method ASTM D256)

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Mat laminates(34.4% glass content) cured with 748 TP polyester resin have 0.192% water absorption for 24 hours and 0.28% for 7 days according to ISO-62-1980 Test Method and exhibit the following physical properties:

Physical properties

	<u>IN DRY</u> <u>LAMINATES</u>	<u>IN WET LAMINATES</u>	<u>TEST METHOD</u>
Flexural Strength MPa	190.3	214.3	ASTM D790-71
Flexural Modules GPa	8.7	7.07	ASTM D790-71
Tensile Strength MPa	130.4	154	ISO 3268-1978
Tensile Modules GPa	11.77	9.88	ASTM D638-72

E. USAGE

PRO-CHEME general purpose polyester laminating resin performs best when it is completely cured. To do so a proper combination of catalyst and accelerator must be used at room temperature for a sufficient period of time.

Generally, 1 percent of catalyst (BUTONOX M-50 MEKP)

Adjustments for shorter or longer geltime can be achieved by varying the quantities of catalyst and/or accelerator used. As a rule, however, the amount of catalyst used should not be more than 2% or less than 0.5%

while that of accelretor should range between 0.4% and 1%. Be sure to measure accurately.

Ensure that the accelerator is completely mixed into the resin before catalyst is added in order to avoid a direct blending which due to a violent reaction may result in an **EXPLOSION**.

Since the viscosity increases as the storage period of resin lengthens, Styrene Monomer can be added to lower it to a desired level. However,excess of styrene monomer added will affect the quality of resin.

However,owing to difficulties in presenting information applicable to all situation, no warranty is expressed or implied and users are recommended to carry out their own tests to determine the applicability of the above information and the suitability of Pro-Cheme resin for their particular requirements.

F. STORAGE

PRO-CHEME polyester resin will remain stable if stored in the dark and at temperatures below 25 °C. Their stability however deteriorates markedly at higher temperatures, especially when they are directly exposed to sunlight. Hence they should be kept in a cool, dark place. It is advisable to finish it within three months.

G. PACKING

PRO-CHEME Polyester resin is packed in steel drums of standard size, containing 220 kilos in net weight.