

Technical Information

GP 694 PA

NDS075/316

LAMINATING RESIN

DESCRIPTION

GP 694 PA is a pre-accelerated unsaturated polyester resin designed for hand lay-up and may be used in most instances without modification in spray up equipment. However one should always check suitability for spraying and add monomer if too thick. GP 694 PA may vary in appearance and physical properties from one batch to another, but it will be suitable for the fabrication of general-purpose non-critical mouldings.

FEATURES	BENEFITS
Low viscosity	Good glassfibre wet-out
Thixotropic	Minimal drainage
Preaccelerated	Requires only the addition of suitable catalyst
Non air-inhibited	Cures to a tack-free finish

TYPICAL LIQUID PROPERTIES

PROPERTY	SPECIFICATION	NCS TEST METHOD
Viscosity @ 25°C, mPa.s Brookfield Spindle 3 5 rpm 50 rpm	1000 - 1400 Record	5.3
Thixotropic index, ratio (5/50)	1,8 – 3,0	5.3
Volatile content, %	42 - 45	7B
Geltime @ 25°C, using 2 phr* BUTANOX M 50, minutes	10 - 15	8
Liquid appearance	Opaque Pink	2
Stability in the dark @ 25°C, months	6 minimum	4
*phr = parts per hundred resin, by mass		

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CURING CHARACTERISTICS

GP 694 PA needs only the addition of catalyst to start the curing reaction. The resin must be allowed to attain workshop temperature (23°C) before being formulated for use. The correct amount of catalyst is therefore added and thoroughly stirred into the resin shortly before use.

Curing should not be carried out at temperatures below 15°C. Ideally, the catalyst level should range between 1 and 2 phr.

POST - CURING

Satisfactory laminates for many applications can be made from GP 694 PA by curing at ambient temperature (but not less than 15°C). When optimum properties and long-term performance are required however, the laminate should be post-cured.

After release from the mould, laminates should be allowed to mature for 24 hours at workshop temperature (23°C). They should then be post-cured for 3 hours at 80°C, although a longer period at a lower temperature will give almost the same result. The post-cure is most effective if it is carried out immediately after the 24 hour maturing period.

PIGMENTS AND FILLERS

GP 694 PA can be pigmented by the addition of up to 5% NCS POLYCHROME PIGMENT PASTE, but lower quantities consistent with achieving adequate hiding power are preferred if the physical properties of the cured laminate are to be maintained.

The addition of fillers to GP 694 PA is likely to change the hardening characteristics of the resin and will affect the properties of the laminate. Fillers should be accurately checked for moisture content and effect on geltime and cure rate before use.

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum properties, polyester resin should be stored in closed containers, maintained below 25°C and away from heat sources and sunlight. All storage should conform to local fire and building codes. Drum stock should be kept to a reasonable minimum with first-in, first-out stock rotation.

Where bung-in-head containers are stored outside, it is recommended that these be stored in a horizontal position to avoid the ingress of water.

STANDARD PACKAGE

Non-returnable metal drums.
Bulk supplies can be delivered by road tanker.

MATERIAL SAFETY DATA SHEET

A Material Safety Data Sheet is available from your NCS Resins' representative. Make certain that you obtain a copy of this guide to the safe handling of unsaturated polyester resins and resin systems.

**PLEASE READ AND UNDERSTAND THE MATERIAL SAFETY
DATA SHEET BEFORE WORKING WITH THIS PRODUCT**

WARNING: CARE MUST BE TAKEN TO AVOID DIRECT MIXING OF ANY ORGANIC PEROXIDE (CATALYST) WITH METAL SOAPS, AMINE OR ANY OTHER POLYMERISATION ACCELERATOR OR PROMOTER, AS VIOLENT DECOMPOSITION WILL RESULT!

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JOHANNESBURG / PRETORIA / DURBAN / CAPE TOWN / PORT ELIZABETH / EAST LONDON