

Technical Information

NCS 232 PA

NDS152/REV02

POLYESTER RESIN FOR LAMINATING AND CASTING

DESCRIPTION

NCS 232 PA is a pre-accelerated, rigid polyester resin designed for the manufacture of good colour laminates or castings.

FEATURES	BENEFITS
Low viscosity	High filler loading
Fast curing	Reasonable production rates
Good colour	Readily pigmentable
Low exotherm	Suitable for construction of thick laminates or castings

OTHER VERSIONS

NCS 232 PAS	Summer version of NCS 232 PA with longer geltime (20 – 25 min)
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TYPICAL LIQUID PROPERTIES

PROPERTY	SPECIFICATION	NCS TEST METHOD
Relative density 25 °/25 °C	1,08 - 1,11	14
Viscosity @ 25 °C, mPa.s	200 - 300	5.2
Acid value, mg KOH/g	18 - 26	13
Volatile content, %	39 - 43	7B
Geltime @ 25 °C, 1 phr* BUTANOX M50, minutes	10 – 15	8
(NCS 232 PAS)	20 - 25	
Liquid appearance	Slight Pink	2
Stability in the dark @ 25 °C, months	3 minimum	4.1
*phr = parts per hundred resin, by mass		

The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute any other warranty expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials, and in no event shall we be liable for special, incidental, or consequential damages. Our standard conditions of contract will apply to all sales

CURING CHARACTERISTICS

NCS 232 PA needs only the addition of catalyst to start the curing reaction. The resin should 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. The ambient temperature and the amount of catalyst control the geltime of the resin formulation. 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 and castings for many applications can be made from NCS 232 PA by curing at ambient temperature (but not less than 15°C). When optimum properties and long-term performance are required however, the laminates and castings should be post-cured.

After release from the mould, laminates and castings 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

NCS 232 PA may 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 laminates and castings are to be maintained. The addition of fillers to NCS 232 PA is likely to change the hardening characteristics of the resin and will affect the properties of the laminates and castings. 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!

NCS RESINS BRANCHES AT:

JOHANNESBURG / DURBAN / CAPE TOWN / PORT ELIZABETH