



## PRODUCT BULLETIN

PPB079/137

### **POLYLITE® PROFILE® 33542-50 PRE-FILLED, PRE-ACCELERATED LOW SHRINK TOOLING RESIN**

#### **DESCRIPTION**

Polylite Profile 33542-50 is a pre-accelerated, pre-filled, unsaturated polyester laminating resin suitable for the construction of GRP tooling. This resin is formulated for room temperature cure using MEKP catalyst.

Polylite Profile 33542-50 represents advancements of the successful Polylite Profile Tooling system, maintaining all the properties of the original resin, with the convenience of a single product used with a conventional catalyst.

#### **FEATURES**

- Reduce tool building time by up to 80%
- Low shrinkage
- Rapid Barcol hardness development

Colour change visible during cure

#### **BENEFITS**

- Significantly reduced labour costs  
Prototype tools can be made quickly and economically  
Gets tools into production sooner
- Tools reproduce the master exactly  
Resulting tools are stress free  
Print through and surface distortion are eliminated  
Pre-release potential is minimised  
Tool post finishing is reduced
- Tools can be demoulded sooner
- Built-in quality control indicator

#### **APPLICATION**

Polylite Profile 33542-50 requires stirring prior to use to ensure even filler distribution. Care must be taken to ensure that the application procedures described in the Profile Tooling Technical Guide are followed. As with all polyesters, time and degree of cure are functions of initiator concentration and temperature. Resin and work area temperatures should be maintained between 18°C and 25°C to ensure satisfactory results. Whether by chopper gun or by hand laminating, a test laminate should be made with a minimum thickness of 4mm. Laminates below 4 mm thick may not cure. The Barcol hardness of the laminate should be above 25 in three hours. If this is not achieved, check the catalyst level is appropriate to the resin temperature and the prevailing ambient temperature. If the Barcol hardness is not achieved in 3 hours do not build the mould. No special precautions are necessary to ensure proper secondary bond performance with PolyLite 33542-50. As with any laminating resin, secondary bonding will be adversely affected in resin-rich areas or in laminates that have been exposed to heat or direct sunlight for an extended period of time. Should such conditions occur, or if greater than 48 hours has elapsed, thorough sanding and cleaning of the substrate is recommended prior to secondary laminate application. Also known to adversely affect secondary bond

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

performance is contamination of the primary laminate (eg. Grinding dust, oil, moisture, waxes, release agents, etc. ...) and type of glass reinforcement used. The laminate surface should be free of contamination prior to secondary bond application.

## TYPICAL PROPERTIES

### PHYSICAL DATA IN LIQUID STATE AT 23°C

Properties	Unit	Value	Test Method
Viscosity Brookfield RV SP4/4rpm ICI Cone and Plate	cP cP	6000 – 8000 700 - 800	BS EN ISO 2555: 2000 ISO 1329: 1993
Flash point	°C	31.5	BS 3900: Part A9: 1986
Density/Specific gravity at 20°C	g/m <sup>3</sup>	1.47	
Gel time: 200g sample 1.25% BUTANOX M50	minutes	20 - 25	
Shelf life, minimum	months	6	

All PolyLite products are quality controlled with the specified catalyst. However, alternatives are available and all users should be aware that a single catalyst formulation cannot provide optimum results in all resin systems. The interaction between the catalyst and the inhibitor/accelerator system used in our products is complex and varies from resin to resin. It is, therefore, absolutely essential that the user evaluate each alternative catalyst in each product before full-scale manufacture is started.

## STORAGE

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 24°C and away from heat ignition sources and sunlight. Resin should be warmed to at least 18°C prior to use in order to assure proper curing and handling. All storage areas and containers should conform to local fire and building codes. Copper or copper containing alloys should be avoided as containers. Store separate from oxidizing materials, peroxides and metal salts. Keep containers closed when not in use. Inventory levels should be kept to a reasonable minimum with first-in, first-out stock rotation.

Additional information on handling and storing unsaturated polyesters is available in NCS Resins application bulletin "Bulk Storage and Handling of Unsaturated Polyester Resins". For information on other NCS Resins resins or initiators, contact your sales representative or authorized NCS Resins distributor.

## SAFETY

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

Obtain a copy of the material safety data sheet on this product prior to use. Material safety data sheets are available from your NCS Resins sales representative. Such information should be requested from suppliers of all products and understood prior to working with their materials.

DIRECTLY MIXING ANY ORGANIC PEROXIDE WITH A METAL SOAP, AMINE, OR OTHER POLYMERIZATION ACCELERATOR OR PROMOTER WILL RESULT IN VIOLENT DECOMPOSITION.

## STANDARD PACKAGE

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

NCS RESINS BRANCHES AT:

**JOHANNESBURG / DURBAN / CAPE TOWN / PORT ELIZABETH**