



Introduction

Crystic® VE 671 PA T LF - 70 is a pre-accelerated, thixotropic, Bisphenol A Epoxy based Vinyl Ester resin with excellent chemical resistance to a wide range of substances at room and elevated temperatures. Crystic® VE 671 PA T LF - 70 is low foaming when catalysed with standard MEKP catalyst. It is recommended for the manufacture of chemical storage tanks or as a corrosion resistant tie layer during the manufacture of GRP swimming pools. Crystic® VE 671 PA T LF - 70 is designed to be applied by hand or spray lamination.

Features and Benefits

Its high HDT makes Crystic® VE 671 PA T LF - 70 suitable for applications where high heat resistance is required.

Crystic® VE 671 PA T LF - 70 has high thixotropy for application on vertical surfaces.

Low foaming formulation reduces the risk of microbubbles within the laminate.

Approvals

Crystic® VE 671 PA T LF - 70 has been qualified against the AS1838 standard for use as a corrosion resistant tie layer in GRP pools.

Note: Crystic® VE 671 PA T LF - 70 is only recommended for use in GRP swimming pools operating at ambient temperatures, and the water must be properly maintained within a pH range of 7.2 – 7.4, and a chlorine level of 1.5 – 2.5ppm (never exceeding 5ppm).

Formulation – Cold Curing

Crystic® VE 671 PA T LF - 70 should be allowed to attain workshop temperature (18 - 25°C) before use. Crystic® VE 671 PA T LF - 70 requires only the addition of a medium reactivity MEKP catalyst to start the curing reaction. The recommended catalyst is Butanox M50 (or equivalent medium reactivity MEKP catalyst), which should also be added at 1 - 2% into the resin and thoroughly incorporated using a low shear mechanical stirrer where possible. (Please consult our Technical Support Department if other catalysts are to be used).

N.B. Catalyst and accelerator must not be mixed directly together since they can react with explosive violence.

Physical Data – Uncured

The following tables give typical properties of Crystic® VE 671 PA T LF - 70 when tested in accordance with SB, BS EN or BS EN ISO test methods.

Property	Unit	Liquid Resin
Appearance	-	Pinkish, Hazy
Viscosity, ICI Cone & Plate, 25°C	dPa.s	2.8
Viscosity, Brookfield Spindle 3 at 5rpm, 25°C	mPa.s	2200
Viscosity, Brookfield Spindle 3 at 50rpm, 25°C	mPa.s	700
Geltime using 1.5% Butanox LPT, 25°C	Mins	70
Stability at 20°C	Months	6

Physical Data – Cured

Property	Unit	Fully cured* resin
Barcol Hardness (Model GYZJ 934- -1)	-	40
Deflection Temperature under load† (1.80 MPa)	°C	100
Elongation at Break	%	4.5
Tensile Strength	MPa	80
Tensile Modulus	GPa	3.4
Flexural Strength	MPa	130

*Curing Schedule - 24 hours at 20°C + 3 hours at 80°C.

†Curing Schedule - 24 hours at 20°C + 5 hours at 80°C + 3 hours at 120°C.

Post Curing

Satisfactory laminates for many applications can be made with Crystic® VE 671 PA T LF - 70 by curing at workshop temperature (25°C). However, for optimum chemical, water, and heat resistant properties, laminates should be post cured before being put into service. Parts should be allowed to cure for 24 hours at 25°C and then be oven cured for 3 hours at 80°C or 16 hours at 40°C.

Chemical Resistance

Fully cured Crystic® VE661PAT may be suitable for use in several chemical environments. For further information around chemical containment requirements please refer to our separate Chemical Containment Brochure which offers a comprehensive guide to the use of Crystic resins in a wide variety of chemical environments. For specific advice and recommendations, please contact Scott Bader Technical Support.

Recommended testing

It is recommended that customers test Crystic® VE 671 PA T LF - 70 before use under their own conditions of application to ensure the required performance is achieved.

Storage

Crystic® VE 671 PA T LF - 70 should be stored in its original container and out of direct sunlight. It is recommended that the storage temperature be less than 20°C where practical, but should not exceed 30°C. Ideally, containers should be opened only immediately prior to use.

Packaging

Crystic® VE 671 PA T LF - 70 is supplied in 200Kg metallic drums or 1000kg IBC's. Bulk supplies can be set up.

Health and Safety

Please see separate Material Safety Data Sheet.

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