

CRYSTIC[®] U 1007 TPA

Fire Retardant Polyester Resin for Resin Transfer Moulding

Introduction

Crystic U 1007 TPA is a filled, pre-accelerated, thixotropic unsaturated polyester resin. It should be used when good fire resistance is required.

Application

Crystic U 1007 TPA can be processed by RTM or VacFlo systems. Crystic U 1007 TPA has been designed to be catalysed with a conventional MEKP at 50%, offering a fast demould time with a low exotherm.

Features and Benefits

Features	Benefits
Pre-accelerate	Only requires catalyst mixing to start curing
Cures with MEKP	Only one catalyst in the workshop
Special accelerator system	Fast curing without exotherm
	Rapid mould turn round
Fast curing	Cost savings
Fire retardant	Good fire performance of finished parts
Special base resin	Very low print through

Formulation

Crystic U 1007 TPA should be stirred well before use and allowed to attain workshop temperature. The following cold curing formulation is recommended:

Crystic U 1007TPA	100 parts
Butanox M50	1 to 2 parts

Catalyst M is a Methyl Ethyl Ketone Peroxide at 50% such as the Butanox M50 from AKZO NOBEL.

Fire Retardancy

Crystic U 1007 TPA contains fire retardant additives in order to improve the fire retardant properties of the final mouldings. Results obtained with indicative M tests would classify the laminates M2 with a standard gelcoat.

Gel Time

The ambient temperature and the amount and type of accelerator control gel time of resin formulations. At 25°C the gel time of Crystic U 1007 TPA containing 2 % of Butanox M50 is approximately 17 minutes.

Additives

Since certain pigments, fillers or extra styrene may affect the properties of Crystic U 1007 TPA their effect should be evaluated before addition to the formulation.

Post Curing

Post curing is recommended in order to develop the heat deflection temperature, dimensional stability and optimum mechanical and fire retardant properties.

Typical Properties

Property		Liquid Resin
Viscosity at 25°C 4500 sec ⁻¹	dPas	3 - 4
Specific Gravity		1.42 – 1.44
Volatile Content	%	18 - 22
Appearance		Cream
Stability at 20°C	months	3
Gel time at 25°C with 100 parts of U 1007 TPA and 1 part Butanox M50	minutes	16 - 19

Packaging

Crystic U 1007 TPA is supplied in 250 kg drums or 1100 Kg containers.

Storage

Crystic U 1007 TPA should be stored in the dark in suitable closed containers. It is recommended that the storage temperature should be less than 20°C where practical, but should not exceed 30°C. Ideally, containers should only be opened immediately prior to use.

Health and Safety

Please see the applicable Material Safety Data Sheets.

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