

Chemical/physical nature

Synolite 5750-A-1 is a DCPD based, pre-accelerated, non-thixotropic, unsaturated polyester resin in styrene monomer.

Major applications

It is designed for general casting applications and can be used specifically for shower tray casting behind a gelcoat or ABS capped acrylic.

Principal properties

Synolite 5750-A-1 is a resilient resin with controlled exotherm. It is characterised by its high filler acceptance and rapid cure rate.

Product specifications

Property	Range	Unit	TM
Viscosity, 23°C	180 - 200	Pa.s	2013
Solids content, IR	64.0 - 67.0	%	2033
Appearance	clear	-	2265
Stability	min. 75	minutes	2300C
Gel time from 25 to 35°C	8.25 - 10.25	minutes	2625
Cure time from 25°C to peak	16 - 20	minutes	2625
Peak temperature	120 - 140	°C	2625
Cure time from 35°C to peak	0 - 9.0	minutes	2625

Remarks

TM 2013: spindle Z2, speed 100 s-1, program
TM 2026: 1% in Butanox M50

Properties of the liquid resin (typical values)

Property	Value	Unit	TM
Stability, no init., dark,	3	months	-
Flash point	33	°C	2800

Properties of cast unfilled resin (typical values)

Property	Value	Unit	TM
Tensile strength	40	MPa	ISO 527-2
Tensile E-modulus	3.3	GPa	ISO 527-2
Elongation at break	1.5	%	ISO 527-2
Flexural strength	80	MPa	ISO 178
Flexural E-Modulus	3.0	GPa	ISO 178
Heat Deflection Temp. (HDT)	82	°C	ISO 75-A
Hardness Barcol 934.1	42	Barcol	2604

Casting cured overnight at ambient and post-cured for 2 hrs at 90°C.

Guidelines before use

Before use, the resin should be conditioned at a well defined, application dependant temperature (usually 15°C minimum for a MEKP / Co cure). Stir the product before blending.

Storage guidelines

The resin should be stored in the original, unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30°C. Shelf life is reduced at higher temperatures. The shelf life of styrene containing unsaturated polyesters will be significantly reduced when exposed to sunlight. Store in dark and in 100% light tight containers only. With DCPD resins there is a tendency for skin formation if exposed to air. Whilst products are formulated to reduce this characteristic, exposure to air and ventilation in bulk storage facilities should be minimised.

Material Safety

A material safety data sheet for the product is available on request.

Test methods

Test methods (TM) referred to in the table(s) are available on request.

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