

Product Data Sheet

Neomould 1982-S-1

Chemical/physical nature

Neomould 1982-S-1 is a low styrene emitting, highly filled preaccelerated unsaturated polyester resin based on DCPD and low profile additives, dissolved in styrene. Neomould 1982-S-1 has low reactivity and viscosity and shows zero shrinkage upon cure.

Major applications

Because of its fast curing characteristics combined with low peak exotherm in thin layers and zero-shrinkage behaviour this resin is extremely suitable for mould making.

The resin was designed with easy processing in mind, wet out of fibres is quick without drag on roller and the colour of the resin makes it easy to spot air pockets during laminating.

The resin exhibits tack-free cure without any effect on secondary bonding and its thixotropy will ensure that it will not slip or drain from vertical surfaces.

Properties of the liquid resin (specifications)

Property	Range	Unit	TM
Appearance	Hazy	-	2265
Viscosity, 23°C, Z2, 2 s ⁻¹	1800 - 3000	mPa.s	2313
Viscosity, 23°C, Z2, 20 s ⁻¹	550 - 750	mPa.s	2313
Viscosity, 23°C, Z2, 50 s ⁻¹	350 - 600	mPa.s	2313
Viscosity, 23°C, Z2, 250 s ⁻¹	250 - 400	mPa.s	2313
Solids content, IR	63 - 66	%	2033
Gel time from 25 to 35°C	22 - 25	minutes	2626
Cure time from 25°C to peak	30 - 38	minutes	2626
Peak temperature	135 - 155	°C	2626

Remarks

Reactivity determined with 100 g resin + 2.0 g Butanox M50 (AKZO Nobel)

Properties of the liquid resin (typical values)

Property	Value	Unit	TM
Flash point	33	°C	2800
Shelf life, no init., dark, 25°C	4	Months	-

Properties of cast unfilled Neomould resins

Property	Value	Unit	TM
Heat deflection temperature (HDT)	80	°C	ISO 75-A

Typical values of CSM laminate

Property	Value	Unit	TM
E-modulus	5.6	GPa	ISO 527-2
Tensile strength	47	MPa	ISO 527-2
Elongation at break	1.8	%	ISO 527-2
Flex strength	62	MPa	ISO 178
Flex modulus	4.0	GPa	ISO 178

Curing conditions

Cured with 2% MEKP Catalyst (AKZO Nobel).

Cured 24 h at room temperature and post-cured 16 h at 60°C

Processing

Neomould 1982-S-1 can be applied by hand lay up and spray lay up.

The final state of cure may be optimized by post-curing at elevated temperatures (e.g. 80 °C) for several hours. Please see our brochure on Neomould 1982-S-1 for optimal application directives.

Guidelines before use

The resin should be conditioned at 15-25 °C, ideally 21°C. Stir well before use.

Storage guidelines

The resin should be stored indoors 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 light. Store in dark and in 100% light tight containers only.

Material Safety

A Material Safety Data Sheet of this product is available on request.

Test methods

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

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