

SYNOLITE™ 2155-N-1

CHEMICAL/PHYSICAL NATURE

Synolite™ 2155-N-1 is despite its low styrene content, a very low viscous, highly reactive unsaturated polyester (UP) resin.

MAJOR APPLICATIONS

Synolite™ 2155-N-1 is particularly suitable for the continuous manufacture of polyester mortar and concrete, for hot press moulding with glass, synthetic and natural fibers and conversion by the injection process to thin-walled components (e.g. manufacture of large surface area press moldings such as car interior panels/trims).

PRINCIPAL PROPERTIES

Synolite™ 2155-N-1 meets the requirements of type 1140 as defined in DIN 16946 for mechanical and thermal properties.

PRODUCT SPECIFICATIONS UPON DELIVERY

Property	Range	Unit	TM
Viscosity, 23°C	260 - 290	mPa.s	2013
Color, APHA	max. 150	-	2017
Solids content, IR	60 - 63	%	2033
Appearance	clear	-	2265
Acid value, as such	25 - 29	mg KOH/g	2401
Stability 120°C	> 60	Minute	2300C
Gel time from 25 to 35°C	4 - 6	Minute	2625
Cure time from 25°C to peak	9 - 13	Minute	2625
Peak temperature	180 - 210	°C	2625

REMARKS

TM 2013: Z2/100/23°C.

TM 2625: 100 g + 0.5 g NL49P + 2.0 g Butanox M 50.

PROPERTIES OF THE LIQUID RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Stability, no init., dark, 25°C	6	Month	-
Density, 20°C	appr. 1100	kg/m ³	2160
Flash point	appr. 33	°C	2800

PROPERTIES OF CAST UNFILLED RESIN (TYPICAL VALUES)

Property	Value	Unit	TM/ISO/DIN
Barcol hardness (GYZJ 934-1)		47	DIN EN 59
Tensile strength	MPa	60	ISO R527-2
Flexural strength	MPa	120	ISO 178
E-modulus in flexion	GPa	4	ISO 178
Elongation at break	%	2	ISO R527-2
Heat deflection temperature	°C	110	ISO 75A
Martens temperature	°C	85	DIN 53458
Volume shrinkage	%	8.9	--
Outer fiber strain		4	ISO 178
Impact strength	KJ/jm ²	10	ISO 179
Thermal conductivity	W/m.K	0.18	DIN 52612
Specific heat	kJ/kg.K	1.30	--
Compressive strength	MPa	115 [*]	ISO 604
Density, 23°C	kg/m ²	± 1220	ISO R 1183

GUIDELINES BEFORE USE

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

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 and the properties might change during storage. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage. The shelf life of monomer 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.

Aliancys is a leading global company active in the sales of Quality Resins for composite applications. Together with its customers, Aliancys is pushing the limits of both composite part manufacturing and performance. Taking an integral approach to new product development, Aliancys is using its full expertise in resin chemistry, material science, and component manufacturing for shaping new applications in composites. So let's talk and increase our mutual business success, both today and tomorrow. More information on www.aliancys.com

PRODUCT INQUIRY? PLEASE CLICK HERE

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