

SYNOLITE™ 5011-N-1

CHEMICAL/PHYSICAL NATURE

Synolite™ 5011-N-1 is a special, chemical / physical nature halogen free resin. The monomer in Synolite™ 5011-N-1 is methyl methacrylate.

MAJOR APPLICATIONS

Synolite™ 5011-N-1 is specifically developed for the pultrusion process. Thanks to the very low viscosity it can be highly filled with aluminumtrihydrate (ATH) to reach fire retardant properties.

PRINCIPAL PROPERTIES

The resin has a very low viscosity, which allows high filler loading. Due to the high reactivity of the resin the line speed of the pultrusion process can be high.

PRODUCT SPECIFICATIONS UPON DELIVERY

Property	Range	Unit	TM
Appearance	clear	-	2265
Acid value, as such	8 - 11	mg KOH/g	2401
Viscosity, 23°C	30 - 50	mPa.s	2013
Solids content, IR	59 - 61	%	2033
Gel time, 82°C	2.5 - 7.0	minutes	2253
Cure time	5 - 11	minutes	2253
Peak temperature	170 - 210	°C	2253

REMARKS

The curing characteristics are obtained using 2 % BPO (Perkadox CH-50 L)

PROPERTIES OF THE LIQUID RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Flash point	appr. 10	°C	2800
Stability, no init., dark, 25°C	3	months	-

PROPERTIES OF CAST UNFILLED RESIN (TYPICAL VALUES)

Property	Value	Unit	TM
Tensile strength	70	MPa	ISO 527-2
Tensile E-modulus	3.8	GPa	ISO 527-2
Elongation at break	2.2	%	ISO 527-2
Flexural strength	130	MPa	ISO 178
Flexural E-Modulus	3.5	GPa	ISO 178
Heat Deflection Temp. (HDT)	108	°C	ISO 75-A
Impact res. - unnotched sp.	24	kJ/m ²	ISO 179

GUIDELINES BEFORE USE

Before use, the resin should be conditioned at a well-defined, application dependent temperature.

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 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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