

Synthopan 970-72

Characteristics:

Synthopan 970-72 is a low-viscosity, thixotropic, pre-accelerated unsaturated polyester resin based on orthophthalic acid and standard glycols with medium reactivity and reduced styrene emission. When cured it gives products with good thermal and mechanical properties and is suited to almost any standard type of processing. The resin contains a blue indicator, which changes colour when peroxide is added.

Use:

Synthopan 970-72 is well suited for hand lay-up and spray techniques.

Processing:

Synthopan 970-72 should be processed at room temperature (18 - 25°C). Lower temperatures have an adverse effect on proper curing. Especially when stored in the presence of air, there may be an increase in the gel time, although this can be compensated by increasing the amount of curing agent.

Properties of the liquid resin:

Property	Range	Unit	Test method
Acid value	max. 30	mg KOH/g	AV-F-S001
Non-volatile content	55 - 59	%	AV-F-F003
Viscosity, 23 °C	250 - 300	mPas	AV-F-V005
Density	1.1	g/cm ³	AV-F-D001
Colour	cloudy, blue	-	AV-F-F008
Refractive index, 20 °C	1.542 - 1.546	-	AV-F-B001
Gel time; 23 °C - 35 °C	20 - 30	min	AV-F-T001
Cure Time; 23 °C - Tmax	40 - 60	min	AV-F-T001
Peak temperature	115 - 150	°C	AV-F-T001
Flash point	34	°C	AV-F-F006
Storage stability, 20 °C	min.3	months	-

Remarks:

Reactivity determined with 1 g Butanox M-50 added to 100 g resin in beaker

Properties of the cured resin (typical values):

Property	Range	Unit	Test method
Flexural strength	110 - 130	N/mm ²	AV-F-M007
Modulus of elasticity in bending	3600 - 3800	N/mm ²	AV-F-M007
Outer fibre strain	3 - 4	%	AV-F-M007
Tensile Strength	60 - 70	N/mm ²	AV-F-M008
Modulus of elasticity in tension	4100 - 4200	N/mm ²	AV-F-M008
Elongation at break	2.0 - 2.2	%	AV-F-M008
Heat deflection temperature (HDT)	90 - 95	°C	AV-F-M009

Transport and storage:

Transport should be carried out in conditions protected from direct action by heat or moisture. Store in a cool place below 25 °C and away from moisture and direct sunlight. When stored for long periods, the thixotropic agent slowly settles out. Before use, the resin should therefore be homogenised (roll or stir drums; for storage tanks, stir with as little aeration as possible, or pump). During this, care must be taken to ensure that the resin temperature is greater than 18 °C, since otherwise the LSE-system can separate and be deposited on the surface in the form of foam.

This product information is the latest available, and is based on experience and observation. No liability is accepted for individual cases, since the conditions under which processing and application are carried out are outside our control. We guarantee a consistently high level of quality supported by our certified Quality Management System. When handling Synthopan® UP resins, observe the instructions in the safety data sheet.