

Synthopan 281 IPX-15

Characteristics:

Synthopan 281 IPX-15 is a low viscous, promoted, preaccelerated unsaturated polyester resin based on orthophthalic acid and standard glycols dissolved in styrene.

Use:

Synthopan 281 IPX-15 is particularly suitable for injection applications to produce high performance laminates. Thick laminates can be made in one go due to low exothermal heat development.

Processing:

Synthopan 281 IPX-15 should be processed at room temperature (15 - 25 °C). Lower temperatures have an adverse effect on proper curing.

Properties of the liquid resin:

Property	Range	Unit	Test method
Acid value	max. 25	mg KOH/g	AV-F-S001
Non-volatile content	55 - 59	%	AV-F-F003
Viscosity, 23 °C	150 - 180	mPas	AV-F-V005
Density	1.1	g/cm ³	AV-F-D001
Colour value, APHA	max. 150	-	AV-F-F008
Refractive index, 20 °C	1.532 - 1.536	-	AV-F-B001
Gel time; 23 °C - 35 °C	50 - 70	min	AV-F-T001
Cure Time; 23 °C - Tmax	75 - 110	min	AV-F-T001
Peak temperature	80 - 120	°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	100 - 125	N/mm ²	AV-F-M007
Modulus of elasticity in bending	3000 - 3600	N/mm ²	AV-F-M007
Outer fibre strain	4.5	%	AV-F-M007
Tensile Strength	65 - 80	N/mm ²	AV-F-M008
Modulus of elasticity in tension	3300 - 3800	N/mm ²	AV-F-M008
Elongation at break	2.5 - 3.5	%	AV-F-M008
Heat deflection temperature (HDT)	95 -105	°C	AV-F-M009
Glass transition temperature	125 °C	°C	-

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.

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.