

**Chemical/physical nature**

Palatal U 569TV-01 is an unsaturated polyester based on orthophthalic acid and standard glycols, dissolved in styrene. Palatal U 569TV-01 contains barrier-forming agents to reduce styrene emission and a thixotropic agent. The resin is pre-accelerated.

Palatal U 569TV-01 has a high reactivity and a low viscosity.

**Major applications**

Palatal U 569TV-01 is well suited for hand lay-up and spray techniques.

It is mainly suitable for the production of thin laminates (< 5 mm). It readily impregnates the reinforcing materials during lay-up and does not run off inclined laminates. An outstanding feature of Palatal U 569TV-01 is its low level of styrene emission and as a consequence reduced exposure to styrene in the workplace.

**Approvals**

Cured unreinforced Palatal U 569TV-01 conforms to type 1140 according to DIN 16946/2 and is classified in group 1 according to DIN 18820/1.

The resin is approved by Det Norske Veritas and Lloyd's Register of Shipping for use in boat building.

**Product specifications upon delivery**

Property	Range	Unit	TM
Viscosity, 23°C	330 - 430	mPa.s	2313
Solids content, IR	56 - 60	%	2033
Cure time from 25 to 35°C	22 - 28	Min	2625
Cure time from 25°C to peak	32 - 40	Min	2625
Peak temperature	150 - 180	°C	2625

**Remarks**

Viscosity: S2/20 s<sup>-1</sup>/23°C

Reactivity determined with 1.5 g Butanox M 50 (AKZO Nobel) added to 100 g resin

**Properties of the liquid resin (typical values)**

Property	Value	Unit	TM
Density, 23°C	appr. 1100	kg/m <sup>3</sup>	2160
Flash point	appr. 33	°C	2800
Shelf life, no init., dark, 25°C	3	Mon	-

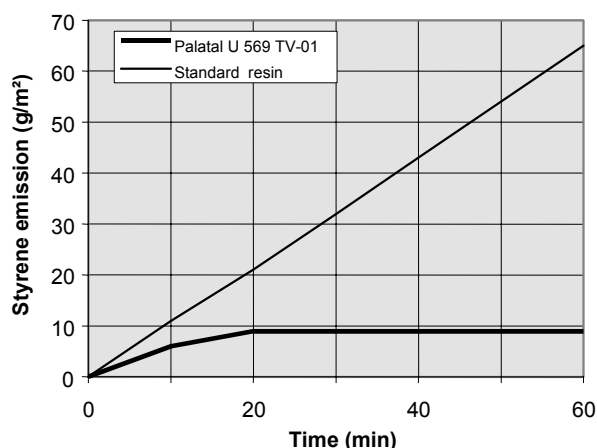
**Typical values of cast unfilled resin**

Property	Value	Unit	TM
Tensile strength	75	MPa	ISO 527-2
Mod. of elasticity in tension	3.8	GPa	ISO 527-2
Elongation at break	3.4	%	ISO 527-2
Flexural strength	115	MPa	ISO 178
Mod. of elasticity in bending	3.7	GPa	ISO 178
Elongation in flex	4.3	%	ISO 178
Impact res. - unnotched sp.	12	kJ/m <sup>2</sup>	ISO 179
Heat deflection temp. (HDT)	90	°C	ISO 75-A
Glass transition temp. (Tg)	125	°C	DIN 53445

**Curing conditions**

Mechanical properties determined on resin not containing thixotropic agent.

Cured with 1 ml MEKP-HA 2 (Peroxid-Chemie GmbH) and 0.2 ml Co-oct. solution (1% Co in styrene) added to 100 g resin. Cured 24 h at room temperature and post-cured 24 h at 80 °C.

**Graph showing reduced styrene emission**

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**Processing**

Palatal U 569TV-01 contains barrier-forming agents to reduce emission of styrene. These agents may reduce the bonding strength of overlaminates. Good strength can be obtained with overlamination of the base laminate within 24 hours, if the surface is not too resin rich. In other cases, the surface might need sanding.

Palatal U 569TV-01 normally exhibits tack-free cure. Nevertheless, the surface may not be cured wholly.

To ensure complete cure of surfaces exposed to air, suitable additives (e.g. a paraffin solution) should be added.

The final state of cure may be optimized by post-curing at elevated temperatures (e.g. 80 °C) for several hours.

**Guidelines before use**

The resin should be conditioned at a well defined, application dependant temperature (usually 15 °C minimum for a cure with MEKP). Stir the product thoroughly 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 and the properties of the resin might change during storage. Exposure to sunlight should be avoided.

**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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