

# Product Data Sheet

## Palatal P 80-01

### Chemical/physical nature

Palatal P 80-01 is an unsaturated polyester, based on orthophthalic acid and standard glycols, dissolved in styrene. Palatal P 80-01 has a high reactivity and a low viscosity.

### Major applications

Due to its low viscosity Palatal P 80-01 features excellent impregnation behaviour during the production of glass-fibre reinforced mouldings which are produced by hand lay-up and injection techniques. Mouldings made from Palatal P 80-01 feature very good mechanical properties. Furthermore Palatal P 80-01 allows high filler loadings in the production of artificial stones and polymer concrete.

### Approvals

Cured unreinforced Palatal P 80-01 conforms to type 1140 according to DIN 16 946/2 and is classified in group 1 according to DIN 18 820/1.

### Product specifications upon delivery

Property	Range	Unit	TM
Appearance	clear	-	2265
Colour, Lico 200	0 - 80	APHA	2017
Viscosity, 23°C	240 - 290	mPa.s	2013
Solids content, IR	60 - 63	%	2033
Cure time from 25 to 35°C	13- 19	Min	2625
Cure time from 25°C to peak	19-26	Min	2625
Peak temperature	165- 195	°C	2625

### Remarks

Viscosity measurement: Z2/100 s<sup>-1</sup>/23°C  
 Reactivity determined with 1.0 g Trigonox 44 B (AKZO-Nobel) and 0.5 g Accelerator NL 49 P (AKZO-Nobel) added to 100 g of resin.

### Typical values of the liquid resin (typical values)

Property	Value	Unit	TM
Density, 20°C	appr. 1100	kg/m <sup>3</sup>	2160
Refractive index	1.5270	-	2150
Flash point	appr. 33	°C	2800
Acid value, as such	25	mg KOH/g	2401
Stability, no init., dark, 25°C	6	Mon	-

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### Typical values of cast unfilled resin

Property	Value	Unit	TM
Tensile strength	80	MPa	ISO 527-2
Mod. of elasticity in tension	3.7	GPa	ISO 527-2
Elongation at break	4.2	%	ISO 527-2
Flexural strength	145	MPa	ISO 178
Mod. of elasticity in bending	4.0	GPa	ISO 178
Elongation in flex	4.9	%	ISO 178
Impact res. - unnotched sp.	13	kJ/m <sup>2</sup>	ISO 179
Heat deflection temp. (HDT)	108	°C	ISO 75-A
Glass transition temp. (Tg)	130	°C	DIN 53445

### Curing conditions

Cured with 1.0 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 24 h at 100°C.

### Processing

Palatal P 80-01 does normally not exhibit tack-free cure. In order to ensure tack-free cure of surfaces exposed to air, suitable additives (e.g. paraffin solution) should be added.

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

### 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. 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.

### Guidelines before use

The resin should be conditioned at a well defined, application dependant temperature (usually 15 °C minimum for a MEKP/Co cure).

### Material Safety

A Material Safety Data Sheet of this product is available on request.