

# Product Data Sheet

## Palatal P 69-02 FC

### Chemical/physical nature

Palatal P 69-02 FC is an unsaturated polyester resin based on orthophthalic acid and standard glycols, dissolved in styrene.

Palatal P 69-02 FC has a high reactivity and a medium viscosity. The resin is specifically formulated and produced (GMP - Good manufacturing practice) to be suitable for food contact and potable water applications.

### Major applications

Palatal P 69-02 FC is suited for a wide range of applications. Mouldings made from this resin exhibit excellent mechanical properties, high resistance to heat deformation and high impact resistance. Palatal P 69-02 FC is particularly suitable for the production of tubes, profiles and tanks in plant constructions i. e. for parts aimed for contact to food and potable water.

### Approvals

Cured unreinforced Palatal P 69-02 FC conforms to type 1140 according to DIN 16946/2 and is classified in group 1B according to EN 13 121-1.

### Regulatory data sheet / Food contact

Specific information on compliance to food contact regulations is detailed in the regulatory data sheet, available on request.

### Product specifications upon delivery

Property	Range	Unit	TM
Appearance	clear	-	2265
Colour, Lico 200	0 - 100	APHA	2017
Viscosity	650 - 750	mPa.s	2013
Solids content, IR	65 - 68	%	2033
Cure time from 25 to 35 °C	12 - 17	Min	2625
Cure time from 25 °C to peak	22 - 28	Min	2625
Peak temperature	155 - 175	°C	2625

### Remarks

Viscosity measurement: Z2/ 100 s<sup>-1</sup>/ 23 °C  
 Reactivity determined with 1.5 g Butanox M 50 (AKZO-Nobel) and 0.5 g Accelerator-NL 49 P (AKZO-Nobel) added to 100 g resin.

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

Property	Value	Unit	TM
Density, 23 °C	appr. 1100	kg/m <sup>3</sup>	2160
Refractive index	1.5255	-	2150
Flash point	appr. 33	°C	2800
Acid value, as such	20	mg KOH/g	2401
Stability, no init., dark, 25 °C	6	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	120	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

Cured with 1 ml MEK-Peroxide (medium activity) and 0.4 ml Co-oct. solution (1% Co in styrene) added to 100 g resin.

Cured for 24 h at room temperature and post-cured 24 h at 80 °C.

### Processing

Palatal P 69-02 FC does normally not exhibit tack-free cure. To ensure tack-free 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 MEKP/Co cure).

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### 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 resin might change during storage. Shelf life is reduced at higher temperatures. 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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