

# Palatal® P 65-972

Composite products based on Palatal® P 65-972 resin feature good mechanical strength, good heat resistance properties and easy pultrusion processing .

## Benefits

- Good mechanical strength
- Good heat resistance
- Easy processing

## Chemical/physical nature

Palatal® P 65-972 is unsaturated polyester resin based on orthophthalic acid and standard glycols, dissolved in styrene. The resin has low viscosity and high reactivity.

## Application

Palatal® P 65-972 is special for varied kinds of FRP moulding products that have a high resistance to heat deformation. Pultrusion, filament winding, RTM, and high-filler moulding and poly-concrete are all recommended.

## Product Specification

Property	Value	Unit	TM
Appearance	Clear	-	TM_2265
Solids content	59-65	%	TM_2033
Viscosity @23°C	400-550	mPa·s	TM_2013
Acid value	20-26	mgKOH/g	TM_2401
Gel_time <sup>1</sup> (25°C until 35 °C)	15-22	minute	TM_2625
Gel_time <sup>2</sup> (66°C until 88 °C)	4.5-6.6	minute	TM_2253
Cure time <sup>2</sup> (66°C until peak)	6.5-8.6	minute	
Peak temperature <sup>2</sup>	220-240	°C	

### Remarks:

- 1.Reactivity measurement :100g resin with 1.0g Trigonox 44B (Akzo-Nobel) and 0.5g NL49P (Akzo-Nobel)
- 2.Reactivity measurement : 100g resin with 2.0g CH-50 (Akzo-Nobel),

## Liquid resin typical properties

Property	Value	Unit	TM
APHA Color value	≤100	-	TM 2017
Flash point	33	°C	TM 2800
Stability, no initiator, dark, 25 °C	6	Month	-

## Unfilled castings typical properties

Property	Value	Unit	TM
Tensile strength	81	MPa	ISO 527-2
Tensile modulus	3.7	GPa	ISO 527-2
Tensile elongation	3.0	%	ISO 527-2
Flexural strength	135	MPa	ISO 178
Flexural modulus	3.8	GPa	ISO 178
HDT	86	°C	ISO 75-2
Unnotched impact strength	18	KJ/m <sup>2</sup>	ISO 179

### Remarks:

1. Cured with 1.0 g Butanox M50 and 1.0 g Accelerator NL 49P added to 100 g of resin. After 24h at RT followed by post curing for 24 h at 80 °C.
2. Testing conditions:temperature: 23±2 °C relative moisture: 50±5%.

## Storage Guidelines

The resin should be stored in a dark and dry place at temperatures between 5 °C and 30 °C. Shelf life is reduced when resin is stored at higher temperatures and the properties of the resin might change during storage. The shelf life of styrene containing Vinyl ester will be significantly reduced when exposed to light. Therefore, store in dark and in 100% light tight containers only. Exposure to direct 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.

## Processing Guidelines

- A. Palatal® P65-972 contains no accelerators. When used in a pultrusion process, the curing system should be selected according to the specific equipment, product, process temperature, pultrusion speed, etc. The recommended dosage level of curing agent is between 0.75% and 2.0% of the total weight of resin.
- B. Maintain shop temperatures between 18°C and 32°C and humidity between 40% and 90%. Consistent shop conditions contribute to consistent gel times and will help the fabricator make a high quality part.

## ISO 9001:2015 Certified

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2015 standards. This certification recognizes that each AOC facility has an internationally accepted model in place for managing and assuring quality. We follow the practices set forth in this model to add value to the resins we make for our customers.

## About AOC

AOC is the leading global supplier of resins and specialty materials which enable customers to create robust, durable and versatile products and components. With strong capabilities around the world in manufacturing and science, the company works closely with customers to deliver unrivaled quality, service and reliability for today, and create innovative solutions for tomorrow. Partner with AOC and we will work together to find the right solutions for your business.

**AOC. Trusted Solutions**

## Brochures

You can find additional information through the Aliancys Product Selector Guide and Pultrusion Resin Application Manual. Both brochures are available from our Business Technical Supports Engineer and Account Manager.

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