

## Product Information

# Hydropel® Low Profile Polyester Resin

### TYPICAL CAST MECHANICAL PROPERTIES\* (2) see back page

	Nominal	Test Method
Tensile Strength, psi/Mpa	7,460/51.4	ASTMD 638
Tensile Modulus, psi/Gpa	359,000/2.47	ASTMD 638
Tensile Elongation, %	3.16	ASTMD 638
Flexural Strength, psi/Mpa	11,300/77.9	ASTMD 790
Flexural Modulus, psi/Gpa	368,000/2.54	ASTMD 790
Heat Distortion Temperature, °F/°C @ 264psi	211/99.3	ASTMD 648

### TYPICAL LIQUID RESIN PROPERTIES\*

Viscosity, Brookfield LV	
Spindle #1 @ 60 RPM, cps	110
Weight Per Gallon, lbs./Gal / gr./cc	8.85/1.06
Non-Volatiles, %	57

### TYPICAL CURING PROPERTIES \*(1) see back page

Catalyst, 2.00% Norox MEKP-9	
Gel Time @ 77°F/25°C, minutes	17
Gel to peak, minutes	10
Peak Exotherm, °F/°C	385/196

\*Typical properties are not to be construed as specifications.



### DESCRIPTION

Hydropel® R049-CPF-17 is a unique low profile resin system for use in RTM, CPM and Liquid Molding processes. Hydropel® R049-CPF-17 offers Class A smoothness for low volume applications with low capital investment. Hydropel® R049-CPF-17 is pre-promoted and formulated for use with MEKP initiators.

### BENEFITS

#### Surface Quality

- Excellent mold reproducibility for Class A applications with or without gelcoat.

#### Superior Mechanical Properties

- Standard paint bake cycles can be used, due to the fast hardness development and high heat distortion.

#### Low Neat Viscosity

- Higher filler loading can be used to achieve for improved surfaces, higher physical properties and improved economics.

#### Lower Exotherms

- Lower in-mold exotherms than typical LP systems that can result in longer tool life.

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## PERFORMANCE GUIDELINES

**A.** Keep full strength catalyst levels between 1.0% - 2.0% of the total resin weight.

**B.** Maintaining shop temperatures between 65°F/ 18°C and 90°F/32°C and humidity between 40% and 90% will help the fabricator make a high quality part. Consistent shop conditions contribute to consistent gel times.

## STORAGE STABILITY

Resins are stable for three months from date of production when stored in the original containers away from sunlight at no more than 70°F/21°C. After extended storage, some drift may occur in gel time.

During the hot summer months, no more than two months stability at 86°F/30°C should be anticipated.

Storage in plastic totes made out of materials such as polyethylene (PE) or polypropylene (PP), will accelerate gel formation and result in a significantly reduced storage stability.

Storage of this resin outdoors in translucent plastic totes may reduce the storage stability to only a few weeks. AOC cannot assume responsibility for gel formation under these storage conditions.

## SAFETY

See appropriate Material Safety Data Sheet for guidelines.

The information contained in this data sheet is based on laboratory data and field experience. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any liability for occurrences arising out of its use. The user, by accepting the products described herein, agrees to be responsible for thoroughly testing each such product before committing to production.

Our recommendations should not be taken as inducements to infringe any patent or violate any law, safety code or insurance regulation.



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## ISO 9001:2000 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2000 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.

## FOOTNOTES

### (1)

The gel times shown are typical but may be affected by catalyst, promoter and inhibitor concentrations and resin, mold and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and fillers can retard or accelerate gelation. It is recommended that the fabricator check the gelling characteristics of a small quantity of resin under actual operating conditions prior to use.

### (2)

Based on tests at 23°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. 1/4" castings were prepared using 2.0% MEKP-9, post cured for 5 hours at 212°F/100°C using AOC test method X-12Ab.