



**Your Formula for Success**  
RESINS | GEL COATS | COLORANTS

## VIPeL® F774 SERIES POLYESTER RESIN



# Product Information

## HIGH CROSS-LINKED TEREPHTHALIC POLYESTER RESIN

### Typical Cast Mechanical Properties <sup>1</sup>

Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	11,700/80	ASTM D638 / ISO 527-1
Tensile Modulus	psi/GPa	560,000/4.0	ASTM D638 / ISO 527-1
Tensile Elongation	%	2.7	ASTM D638 / ISO 527-1
Flexural Strength	psi/MPa	17,300/114	ASTM D 790 / ISO 178
Flexural Modulus	psi/GPa	560,000/4.0	ASTM D 790 / ISO 178
Heat Distortion Temp.	°F/°C@264 psi	295/146	ASTM D648 / ISO 75-A
Barcol Hardness		46	ASTM D2583 / EN 59

### Typical Liquid Properties<sup>2</sup>

VERSIONS	Viscosity cps	Thix Index	Gel Time Min	Gel to Peak Min	Peak Exotherm (°F/°C)	% HAP Content
F774-APT-20	600 <sup>6</sup>	2 <sup>7</sup>	20 <sup>8</sup>	10	395/200	42
F774-BBA-00	400 <sup>9</sup>	NA	16 <sup>10</sup>	8	-	43
F774-BBG-00	400 <sup>4</sup>	NA	20 <sup>5</sup>	12	400/205	42
F774-NNA-30	130 <sup>4</sup>	NA	30 <sup>8</sup>	10	428/220	47
F774-PTA-25	700 <sup>1</sup>	2 <sup>2</sup>	25 <sup>3</sup>	11	428/220	45
F774-PTA-30	700 <sup>1</sup>	2 <sup>2</sup>	30 <sup>3</sup>	11	428/220	45
F774-PTD-30	625 <sup>1</sup>	2 <sup>2</sup>	30 <sup>3</sup>	11	428/220	46
F774-PTW-30	700 <sup>1</sup>	2 <sup>2</sup>	30 <sup>3</sup>	11	428/220	45

NA- Not applicable

1) 77°F/25°C Brookfield RVT viscosity spindle 2 at 20 rpm

2) 2/20 rpm Thix Index

3) 77°F/25°C Gel time with 1.0% MEKP-925H (100 gram mass)

4) 77°F/25°C Brookfield RV viscosity spindle 2 at 30 rpm

5) 77°F/25°C Gel time with 0.25% Cobalt 6% and 1.5% MEKP M50G

6) 77°F/25°C Brookfield LV viscosity #3 @ 60rpm

7) 6/60 rpm Thix Index

8) 77°F/25°C Gel time with 1.5% MEKP-9H

9) 77°F/25°C Brookfield LV viscosity spindle 2 @ 30 rpm

10) 88°F/25°C Gel time with 0.25% Cobalt 6% and 1.25 MEKP-900

### DESCRIPTION

Vipel F774 Series are high cross-linked terephthalic polyester resins.

### APPLICATION

Vipel F774 series resin were developed to meet the demanding requirements of underground petroleum storage tanks that contain oxygenated fuels.

### BENEFITS

#### UL Recognition

AOC's Vipel F774 Series resins are recognized by UL for meeting the requirements of UL 1316 and UL 1746 Part II and Part III.

#### Corrosion Resistance

Vipel F774 Series resins provide excellent corrosion resistance when used in contact with inorganic and organic acids. Solvent resistance is field-proven for many fuels including gasoline, kerosene, heating oil and crude oils. Refer to AOC's "Corrosion Resistant Resin Guide" for corrosion resistance information or for questions regarding suitability of a resin to any particular chemical environment contact AOC.

#### Versatile

Suitable for various fabricating methods such as hand lay-up, spray-up, filament winding, etc.

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



### PERFORMANCE GUIDELINES

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

B. Maintain shop temperatures between 65°F/18°C and 90°F/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.

C. Sanding and/or grinding is recommended if a secondary bond is applied to a laminate that was made with a resin containing wax.

### STORAGE STABILITY

This product is stable for three months from the date of manufacture when stored in the original containers, away from direct sunlight or other UV light sources and at or below 25°C (77°F). Storage stability of two months or less should be anticipated if the storage temperature exceeds 30°C (86°F).

After extended storage, some drift may occur in the product viscosity and gel time.

### SAFETY

See the appropriate Safety Data Sheet for guidelines.

### ISO 9001:2008 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2008 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.) These tests are based on Vipel F774 with 45% styrene at 77°F/25°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. Thixotropic components, if applicable, are excluded from casting samples. Castings were prepared using 0.1% Cobalt 12%, 1.0% MEKP and cured for 5 hours at 212°F/100°C.

(2) The gel times shown are typical but may be affected by catalyst, promoter, inhibitor concentration, resin, mold, and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and/or filler can retard or accelerate gelation. It is recommended that the fabricator check the gelling charac-



**Your Formula for Success**  
RESINS | GEL COATS | COLORANTS

**AOC World Headquarters**  
955 Highway 57 East, Collierville, TN 38017

+01 901.854.2800  
[AOC-Resins.com](http://AOC-Resins.com)

Pub. F774 Series NA  
Effective Date: Mar. 2017  
Copyright © 2017

### SALES CONTACTS

**NORTH AMERICA**  
Toll free: +1 866 319 8827  
[northamerica@aoc-resins.com](mailto:northamerica@aoc-resins.com)

**LATIN AMERICA**  
+01 863 815 5016  
[latinamerica@aoc-resins.com](mailto:latinamerica@aoc-resins.com)

**MIDDLE EAST**  
+44 1206 390415  
[middleeast@aoc-resins.com](mailto:middleeast@aoc-resins.com)

**EUROPE**  
+44 1206 390415  
[europe@aoc-resins.com](mailto:europe@aoc-resins.com)

**AOC UK LTD.**  
+44 01206 390400  
[salesUK@aoc-resins.com](mailto:salesUK@aoc-resins.com)

**INDIA**  
+44 1206 390415  
[india@aoc-resins.com](mailto:india@aoc-resins.com)

**ASIA/AUSTRALIA**  
+44 1206 390415  
[asia@aoc-resins.com](mailto:asia@aoc-resins.com)

AOC is a registered trademark of AOC, LLC.

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. This data sheet and its contents are the confidential and proprietary information of AOC and it may not be modified altered deconstructed or presented in any other manner without the explicit authorization of AOC and/or its legal counsel.