

## Product Information

# Vipel® Corrosion High-Cross Linked, Terephthalic Polyester Resin

### TYPICAL CAST MECHANICAL PROPERTIES \* (1) see back page

Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	11,700/80	ASTM D 638
Tensile Modulus	psi /GPa	560,000/4.0	ASTM D 638
Tensile Elongation	%	2.7	ASTM D 638
Flexural Strength	psi /MPa	17,300/114	ASTM D 790
Flexural Modulus	psi /GPa	560,000/4.0	ASTM D 790
Heat Distortion Temperature °F/°C, @ 264 psi		295/146	ASTM D 648
Barcol Hardness		46	ASTM D 2583

### TYPICAL LIQUID RESIN PROPERTIES of Vipel® F774-PT\* (2) see back page

VERSION	VISCOSITY, Cps	THIX INDEX	GEL TIME, minutes	GEL TO PEAK EXOTHERM, minutes	PEAK EXOTHERM, °F/°C	HAP CONTENT, %
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-BBC-00	400 <sup>4</sup>	NA	16 <sup>5</sup>	24	285/140	45

NA- Not applicable

HAP- Hazardous Air Pollutant

- 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 (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 1.25% MEKP (18 grams mass)

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

### DESCRIPTION

Vipel® F774-PTA series is a high cross-linked terephthalic polyester resin. Vipel F774 series resin are recognized by underwriters laboratories for meeting the requirements of UL 1316 and UL 1746 Part II and Part III.

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



### BENEFITS

#### UL Recognition

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

The 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.

#### Food and Drug

All resins in this datasheet are manufactured from raw materials that are listed in FDA regulation Title 21 CFR 177.2420. It is the fabricator's responsibility to also be sure that the final composite is well cured. All composites used for FDA applications should be post cured at 180°F/82°C for at least 4 hours. After post curing it should be washed with soap and water and rinsed.

# Vipel® F774-PTA Polyester Resin

## 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 appropriate Material Safety Data Sheet for guidelines.

## 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)

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 characteristics of a small quantity of resin under actual operating conditions prior to use.

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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