AOC®
World Leader in Resin Technology

Vipel® F764 Series Polyester Resin

Product Information

Vipel Corrosion High Cross-Linked Isophthalic Polyester Resin



TYPICAL CAST MECHANICAL PROPERTIES * (1) see back page

	Nominal	Test Method
Tensile Strength, psi/MPa	10,100/70	ASTM D 638
Tensile Modulus, psi /GPa	510,000/3.5	ASTM D 638
Tensile Elongation, %	2.3	ASTM D 638
Flexural Strength, psi /MPa	17,800/122	ASTM D 790
Flexural Modulus, psi /GPa	560,000/3.9	ASTM D 790
Heat Distortion Temperature °F/°C, @ 264 psi	282/139	ASTM D 648
Barcol Hardness	51	ASTM D 2583

TYPICAL LIQUID RESIN PROPERTIES of Vipel® F764 *(2) see back page

Versions	Viscosity, cps	Thix Index	Gel Time, min	Gel to Peak, min	Peak Exotherm, °F/C°	Specific Gravity	Styrene Content %
F764-BBD-00	400[1]	NA	20[9]	10	414/212	1.09	42
F764-BTX-00	600[1]	3[2]	20[3]	10	331/166	1.08	44
F764-PTA-27	600[4]	2[5]	27[6]	16	425/218	1.07	45
F764-PTH-20	500[7]	2[5]	20[8]	17	374/190	1.07	44

1) 77°F/25°C Brookfield LV viscosity spindle #2 at 30 rpm
2) 77°F/25°C 3/30 Thix Index
3) 77°F/25°C Gel time with 0.3% cobalt 6% and 1.5% MEKP
4) 77°F/25°C Brookfield RV viscosity spindle #2 at 20 rpm
5) 77°F/25°C 2/20 Thix Index
6) 77°F/25°C Gel time with 1.0% MEKP
7) 77°F/25°C Brookfield LV viscosity spindle 3 at 60 rpm
8) 77°F/25°C Gel time with 1.5% MEKP
9) 77°F/25°C Gel time with 0.25% cobalt 6% and 1.25% MEKP

*Typical properties are not to be construed as specifications.

DESCRIPTION

AOC's Vipel F764 Series is a high cross-linked isophthalic polyester resin. Vipel F764 Series resins are recognized by underwriters laboratories for meeting the requirements of UL 1316 and UL 1746 Part II and Part III.

AOC's Vipel F764 Series resins were developed to meet the demanding requirements of underground petroleum storage tanks that contain oxygenated fuels.

BENEFITS

UL Recognition

AOC's Vipel F764 Series resins are recognized by UL for meeting the requirements of UL 1316 and UL 1746 Part II and Part III.

Corrosion Resistance

Vipel F764 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 for at least 4 hours. After post curing it should be washed with soap and water and rinsed.

Vipel®
F764 Series
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 9002 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9002 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® F764 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 post cured.

(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.

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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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