

## Product Information

# Isophthalic Modified Polyester Resin

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

Test	Units of Measure	Nominal	ISO Methods
Tensile Strength	MPa	85	ISO 527-1
Tensile Modulus	GPa	3.2	ISO 527-1
Tensile Elongation	%	4.9	ISO 527-1
Flexural Strength	MPa	143	ISO 178
Flexural Modulus	GPa	3.5	ISO 178
Heat Distortion Temperature	°C	89	ISO 75-A

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

### TYPICAL LIQUID PROPERTIES at 25°C\* see back page (2)

VERSION	VISCOSITY, Cps	THIX INDEX	GEL TIME, minutes	GEL TO PEAK EXOTHERM, minutes	PEAK EXOTHERM, °C	STYRENE CONTENT, %
F739-AA A-00	800 <sup>1</sup>	NA	8 <sup>2</sup>	8	187	35
F739-BB A-00	350 <sup>3</sup>	NA	15 <sup>11</sup>	11	187	35
F739-BB B-00	500 <sup>3</sup>	NA	25 <sup>4</sup>	9	182	40
F739-FBB-16	500 <sup>5</sup>	2.5 <sup>6</sup>	16 <sup>7</sup>	7	195	44
F739-BB C-00	500 <sup>5</sup>	2.5 <sup>6</sup>	100 <sup>10</sup>	20	190	44
F739-FBC-15	500 <sup>5</sup>	2.5 <sup>6</sup>	15 <sup>8</sup>	7	195	44
			100 <sup>9</sup>	20	190	44

NA - Not applicable

HAP - Hazardous Air Pollutant

- 1) 25°C Brookfield RV viscosity spindle 3 at 50 rpm
- 2) 25°C Gel time with 0.50% Cobalt 6% and 1.25% MEKP (50% active)
- 3) 25°C Brookfield LV viscosity spindle 3 at 60 rpm
- 4) 25°C Gel time with 0.20% Cobalt 6%, 0.05% DMA and 1.25% MEKP (50% active)
- 5) 25°C Brookfield LV viscosity spindle 3 at 60 rpm
- 6) 6/60 rpm Thix Index
- 7) 25°C Gel time with 1.5% MEKP (50% active)
- 8) 25°C Gel time with 1.8% MEKP (50% active)
- 9) 45°C Gel time with 1.8% MEKP (50% active)
- 10) 25°C Gel Time with 0.2% Cobalt-6%, 0.05% DMA and 1.8% MEKP (50% active)
- 11) 25°C Gel Time with 0.25% Cobalt-10%, 0.05% DMA and 1.0% MEKP

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



### DESCRIPTION

The F739-Series is an isophthalic modified polyester resin. Parts made with these resins have a great deal of resiliency and high mechanical properties.

### CORROSION RESISTANCE

This resin provides excellent corrosion resistance when used in contact with inorganic and organic acids. Refer to AOC's "Corrosion Resistant Resin Guide" under F737 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 82°C for at least 4 hours. After post curing, laminate should be washed with soap and water and rinsed.

# F739-Series Isophthalic Modified Polyester Resin

## PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 0.75% - 2.0% of the total resin weight.

B. Maintaining shop temperatures between 18°C and 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

F739-FBB-16 and F739-FBC-15 are stable for 3 months from the date of manufacture when stored in original containers, away from direct sunlight or other UV light sources and at or below 25°C. All other F739 products are stable for 6 months from the date of manufacture when stored in original containers, away from direct sunlight or other UV light sources and at or below 25°C.

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)

Based on tests at 25°C and 50% relative humidity on F739-BBB-00. All tests performed on unreinforced cured resin castings. 3mm castings were prepared using 1.0% BPO and post cured.

### (2)

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.



## Global Contacts

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