

Atlac® F010J

Versatile Vinyl ester resin for corrosive environments

Atlac® F010J is a bisphenol A epoxy-based vinyl ester resin dissolved in styrene.

Components based on Atlac® F010J feature high mechanical strength and exhibit excellent resistance to chemicals and heat.

Benefits

- Easy processing into durable components
- Continued operation of process equipment: resisting various chemicals at elevated temperatures
- Great mechanical strength and ductility
- Low maintenance and low cost of ownership
- Cures well with a broad range of peroxides

Major Applications

With Atlac® F010J resin you can make strong and durable parts with excellent corrosion resistance.

Very high versatility in processing, working with multiple types of peroxides.

Certifications and Approvals

The Atlac® F010 resin series have been evaluated and certified by the Deutsches Institut für Bautechnik (DIBT) for use in Anti-Corrosion applications.

Product Specifications

| Property | Value | Unit | TM |
|--------------------------------------|----------------------|----------|---------|
| Appearance | slightly hazy - hazy | | TM 2265 |
| Solids content | 60,5 - 64,5 | % | TM 2033 |
| Viscosity 23 °C, 100 s ⁻¹ | 490 - 600 | mPa.s | TM 2013 |
| Acid value | 2 - 20 | mg KOH/g | TM 2401 |
| Gel time 25 until 35 °C | 10 - 15 | min | TM 2625 |
| Peak time | 18 - 23 | min | TM 2625 |
| Peak temperature | 140 - 170 | °C | TM 2625 |

Viscosity measurement: Z2/ 100 s-1/ 23°C.

Reactivity measurement: 2.0 g (MEKP) Low reactive and 1.5 g Cobalt accelerator (1%) added to 100 g resin

Liquid resin typical properties

| Property | Value | Unit | TM |
|--------------------------------------|-----------|-------------------|---------|
| Density 23 °C | 1050 | kg/m ³ | TM 2160 |
| Flash point | 33 | °C | TM 2800 |
| Stability (no initiator, dark, 25°C) | 6 | month | |
| Color | Yellowish | - | |

Unfilled castings typical properties

| Property | Value | Unit | TM |
|-------------------------------------|-----------|-----------------------|------------|
| HDT | 120 | °C | ASTM D648 |
| Tensile strength | 88 | MPa | ASTM D638 |
| Tensile modulus | 3.2 | GPa | ASTM D638 |
| Elongation at break | 6.2 | % | ASTM D638 |
| Flexural strength | 153 | MPa | ASTM D790 |
| Flexural E-Modulus | 3.5 | GPa | ASTM D790 |
| Barcol Hardness | 39 | | ASTM D2583 |
| Critical Strain Energy Release Rate | 100 | J.m ² | ASTM E399 |
| Stress Intensity Factor | 0.6 | MPa.m ^{1/2} | ASTM E399 |
| Dielectric Dissipation 60 Hz | 2,5 - 3,7 | 10 ³ | DIN 53483 |
| Dielectric Dissipation 1 kHz | 2,2 - 3,3 | 10 ³ | DIN 53483 |
| Dielectric Dissipation 1 MHz | 1,6 - 2,3 | 10 ³ | DIN 53483 |
| Dielectric Constant 60 Hz | 3,4 - 3,5 | | DIN 53483 |
| Dielectric Constant 1 MHz | 3,3 - 3,4 | | DIN 53483 |
| Surface Resistivity | 1 | 10 ¹³ Ω | DIN 53482 |
| Volume Resistivity | 1 | 10 ¹⁶ Ω.cm | DIN 53482 |
| Dielectric Strength | 120 | kV/mm | DIN 53481 |
| Tg | 130 | °C | DIN 53445 |

Storage Guidelines

The resin should be stored indoors in a dry place at temperatures between 5°C and 30°C, in the original, unopened, 100% light-tight and undamaged packaging.

The properties of the resin may change slightly during storage. Shelf life is shorter at higher temperatures.

Material Safety

A Material Safety Data Sheet of this product is available on request.

Test Methods

Test methods (TM) referred to in the table(s) are available on request.

ISO 9001:2015 Certified

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2015 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.

AOC. Trusted Solutions

AOC is the leading global supplier of resins and specialty materials which enable customers to create robust, durable and versatile products and components. With strong capabilities around the world in manufacturing and science, the company works closely with customers to deliver unrivaled quality, service and reliability for today, and create innovative solutions for tomorrow. Partner with AOC and we will work together to find the right solutions for your business.

Contact us for more information

We will help you to choose the right resin solution.

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