Atlac® 580 AC 300

Vinyl ester urethane resin used in Vacuum Infusion for Marine applications

Atlac® 580 AC 300 resin is broadly used for making fiber reinforced components through vacuum infusion processes, resulting in strong and durable boats and vessels with excellent hydrolysis resistance and good thermal stability.

The Atlac® 580 AC 300 resin has been certified by Lloyd's Register and RINA for use in Marine applications.

Benefits

- Easy processing in vacuum infusion through excellent de-aeration and fiber wetting
- Excellent hydrolysis resistance
- Certified by Lloyd's Register and RINA
- Low exotherm allowing manufacturing of thick components

Major Applications

Atlac® 580 AC 300 is developed for vacuum infusion applications. The resin is specially recommended for the production of fiber reinforced boats.

Atlac® 580 AC 300 features low viscosity enabling excellent fiber wetting and impregnation of glass fiber reinforcement materials. Compared to conventional vinyl ester resins foaming after MEKP addition is highly reduced in Atlac® 580 AC 300 leading to less air bubble inclusion and air inhibition inside the laminate.

The resin is pre-accelerated and allows good curing with low peak exothermic development during cure. Cured products of Atlac® 580 AC 300 show excellent hydrolysis resistance and good thermal stability.

Certifications and Approvals

Cured non-reinforced Atlac® 580 AC 300 conforms to type 1310 according to DIN 16946/2. According to EN13121/1 Atlac® 580 AC 300 is classified group 7B. The resin is certified by Lloyd's Register as laminating resin for use in Marine applications.

Product Specifications

Property	Value	Unit	TM
Appearance	Slightly hazy		TM 2265
Solids content	45 - 48	%	TM 2033
Viscosity 23 °C, 100 s^{-1}	130 - 170	mPa.s	TM 2013
Gel time 25 until 35 °C	65 - 75	min	TM 2625
Peak time	80 - 95	min	TM 2625
Peak temperature	130 - 150	°C	TM 2625
Water content	0 - 0.06	%	TM 2350

Viscosity measurement: Z2/100s^{-1}/23°C. Reactivity measurement: 3.0 g (MEKP) Medium reactive Methyl Ethyl Ketone Peroxide added to 100 g of resin.

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Liquid			
Property	Value	Unit	TM
Flash point	33	°C	TM 2800
Stability (Solid, dark, 25 °C)	6	month	

Solid Unfilled			
Property	Value	Unit	TM
Density 20 °C	1080	kg/m³	DIN 53479
Tensile strength	78	MPa	ISO 527-2
Tensile modulus	3	GPa	ISO 527-2
Elongation at break	3.5	%	ISO 527-2
Flexural strength	150	MPa	ISO 178
Flexural E-Modulus	3.5	GPa	ISO 178
HDT	107	°C	ISO 75A
Impact strength	15	kJ/m²	ISO 179

Base resin cured with 1.5 % (MEKP) Medium reactive Methyl Ethyl Ketone Peroxide, 0.5 % DMA (10%) and 3 % Cobalt accelerator (1%). After 24 h. at RT followed by post curing for 3 h at 100 °C.

Application Guidelines

Before use, the resin should be conditioned at a well-defined application dependent temperature (usually 15°C minimum for a MEKP / Cobalt cure).

Brochures

You can find additional information through the Atlac® Product Guide. For detailed information on the chemical resistance of Atlac® resins, please consult our Chemical Resistance Guide. Both brochures are available for download from the AOC web site (www.aocresins.com).

Storage Guidelines

The resin should be stored in a dark and dry place in original unopened and undamaged packaging at temperatures between 5 °C and 30 °C. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage.

The shelf life of styrene containing Vinyl ester resins will be significantly reduced when exposed to light. Store in dark and in 100% light tight containers only. Exposure to direct sunlight should be avoided.

Material Safety

A Safety Data Sheet (SDS) of this product is available on request.

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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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