Atlac® XP 810 X

MgO thickenable VE resin for structural SMC applications

Components based on Atlac® XP 810 X feature high mechanical properties and elevated heat resistance. In addition, they provide great chemical resistance. With Atlac® XP 810 X resin you can make strong and durable parts both with glass and carbon fiber.

Benefits

- High mechanical strength
- Resistance to elevated temperatures
- Can be used with glass and carbon fiber
- Great chemical resistance
- Freedom of design

Major Applications

The resin is used in parts close to a combustion engine in trucks and passenger cars, like oil sumps and valve covers.

Atlac XP810X® has a high molecular weight and therefore can readily be thickened with MgO.In combination with Palapreg® H814-01 the SMC can be pigmented homogeneously.

Product Specification

Property	Value	Unit	TM
Appearance	Clear		TM 2265
Color Lico Gardner	0 - 3.5	G	TM 2017
Viscosity 23 °C, 100 s^{-1}	2000 - 2500	mPa.s	TM 2013
Viscosity after 120 min	40000 - 145000	mPa.s	TM 2914B
Acid value	22 - 25	mg KOH/g	TM 2401
Gel time	145 - 180	s	TM 2261
Peak time	180 - 240	s	TM 2261
Peak temperature	260 - 280	°C	TM 2261
Batch Peroxide		-	TM 2999 1
Batch Accelerator		-	TM 2999 2
Water content	0.05 - 0.09	ppm	TM 2350

TM 2914: at 80°C; Reactivity determined with 1g t-Butyl peroxybenzoate added to 100g resin.

Liquid resin typical properties

Property	Value	Unit	TM
Density 20 °C	1100	kg/m³	TM 2160
Stability Solid dark 25 °C	3	month	

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Unfilled castings typical properties			
Property	Value	Unit	TM
Tensile strength	81	MPa	ISO 527-2
Tensile modulus	3.6	GPa	ISO 527-2
Elongation at break	3.5	%	ISO 527-2
Flexural strength	155	MPa	ISO 178
Flexural E-Modulus	3.7	GPa	ISO 178
HDT ISO 75 Ae	145	℃	ISO 75 Ae
Impact strength unnotched spec	13	kJ/m²	

Cured reinforced resin typical properties			
Property	Value	Unit	TM
Glass content	48	%	ASTM D2584
Tensile strength	170	MPa	ISO 527-2
Tensile Elongation	1.8	%	ISO 527-3
Flexural strength	280	MPa	ISO 178
Flexural Modulus	13.5	GPa	ISO 178
Tensile modulus	14	GPa	ISO 527-2

Application Guidelines

Atlac® XP810X can be processed together with Palapreg® Low Profile Additives (LPA) into LS/LP SMC and BMC. Depending on the size of the moldings it is recommended to add 300 to 600 ppm p-benzoquinone to the system (calculated on UP-resin plus LPA).

Storage Guidelines

The resin should be stored indoors in the original, unopened and undamaged packaging, in a dry place at temperatures between 5°C and 30°C and the properties might change during storage. Shelf life is reduced at higher temperatures and the properties of the resin might change during storage. The shelf life of styrene containing unsaturated polyesters will be significantly reduced when exposed to light. Store in dark and in 100% light tight containers only.

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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