Atlac® 490-901

Terephthalic polyester resin for corrosive environments

Atlac® 490-901 resin based laminates feature excellent retention of mechanical properties at elevated temperature. Furthermore a good chemical resistance to acids, aqueous solution of salt and organic solvents.

Benefits

- Excellent corrosion resistance, including gasoline, kerosene, heating oil and crude oils.
- High mechanical properties
- Continued process operation
- Extended equipment life

Major applications

Atlac® A490-901 is designed for the following process such as hand lay-up, spray-up, filament winding and pultrusion, etc.

The solvent resistance of Atlac® 490-901 resin makes it excellent for GRP tanks, pipes and linings for handling liquid hydrocarbons. Atlac® 490-901 resin is approved as matrix materials for FRP tanks for underground fuel storage according to BRL K548/01. The resin can also be used to formulate flake glass lining compounds and is recommended for the GRP reinforcement layers of equipment with liners of polypropylene.The resin shows excellent retention of laminate properties at elevated temperature. Furthermore a good chemical resistance to acids, aqueous solution of salt and organic solvents.

Product Specifications

Property	Value	Unit	TM
Appearance	Clear-sl Hazy		TM 2265
Gel time 25 until 35 °C	21 - 36	min	TM 2625
Peak temperature	160 - 180	℃	TM 2625
Peak time	10 - 25	min	TM 2625
Solids content	50 - 56	%	TM 2033
Viscosity 23 °C, 100 s^{-1}	400 - 550	mPa.s	TM 2013

Reactivity @25℃: 100 g resin mixed with 1.5 g Cobalt accelerator (1%) + 1.5 g (MEKP) Medium reactive Methyl Ethyl Ketone Peroxide

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Liquid resin typical properties

Property	Value	Unit	TM
Flash point	33	℃	TM 2800
Stability (Solid, dark, 25 °C)	6	month	25 °C, dark, TM 2303

Unfilled castings typical properties

Property	Value	Unit	TM
Flexural E-Modulus	3.6	GPa	ISO 178
Flexural strength	115	MPa	ISO 178
HDT	125	℃	ASTM D648
Impact strength unnotched spec	10	kJ/m²	ASTM D4812
Elongation at break	2.1	%	ISO 527-2
Tensile modulus	3	GPa	ISO 527-2
Tensile strength	60	MPa	ISO 527-2

Cured with 1.5g Butanox® M50 (AkzoNobel) and1.5g NL-49P added to 100 g resin. Curing 24h at room temperature and post-curing 3 hrs at 100°C and 3 hrs at 120°C. For HDT and Tg, post-curing 3 hrs at 100°C and 3 hrs at 150°C.

Storage Guidelines

The resin should be stored indoors in the original, unopened, 100% light-tight and undamaged packaging, in a dry place at temperatures between 5°C and 30°C. The properties of the resin may change slightly during storage. Shelf life is shorter at higher temperatures.

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Contact us for more information

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