L552-LCB-05

Orthophthalic/NPG resin (Group 3) for UV-cure CIPP/Relining

L552-LCB-05 is a light thixotropic unsaturated polyester resin based on Orthophthalic acid and NPG. The resin can readily be thickened with MgO.

The resin can be cured with both conventional curing agents and low energy UV-Light (365 - 420 nm).

Benefits

- Enhanced chemical resistance
- Great mechanical strength and resilience
- Fast installation (curable through UV light)
- Easy processing into line through MgO thickenable capability
- Reliable performance in glass liners

Major Applications

L552-LCB-05 provides the corrosion resistance, durability and toughness required for glass fibre reinforced UV-Cured In Place Pipe applications.

Certifications and Approvals

L552-LCB-05 conforms to DIN 16946/2 type 1140 group 3 according to DIN 18820/1 and group 4 according to DIN EN 13121-1.

Product Specifications

Property	Value	Unit	TM
Solids content	59 - 62	%	TM 2033
Viscosity 25 °C, Brookfield	1700 - 2300	mPa.s	TM 7001
Peak time	3,5 - 4,6	min	TM 2500
Peak temperature	170 - 200	℃	TM 2500
Water content	0,18 - 0,2	%	TM 2350

Brookfield Viscosity RVF#3, 30 rpm, 25°C

Thickening at 20°C, TM 7002: 1,7% Luvatol EK30NV, Brookfield RVF#7: 150.000 - 350.000 mPa.s

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Liquid			
Property	Value	Unit	TM
Density 23 °C	1100	kg/m³	TM 2160
Flash point	33	°C	TM 2800
Stability (no initiator, dark, 25°C)	6	month	

Solid Unfilled			
Property	Value	Unit	TM
Tensile strength	77	MPa	ISO 527-2
Tensile modulus	3.7	GPa	ISO 527-2
Elongation at break	3.1	%	ISO 527-2
Flexural strength	132	MPa	ISO 178
Flexural E-Modulus	4	GPa	ISO 178
HDT	110	°C	ASTM D648
Barcol Hardness	48	-	TM 4515

Cure: 1.0 g cobalt accelerator (1%) + 1.0 g (MEKP) Medium reactive Methyl Ethyl Ketone Peroxide in 100 g resin. Post cure: 24 h Rt + 24 h 100°C

Application Guidelines

L552-LCB-05 can be cured with low energy UV-light (wave length 365 – 420 nm) or conventionally with usual curing agents. If the resin is not exposed to direct daylight, processing time may be extended to several hours.

Curing in places that are not directly exposed to day- or UV-light can be assisted by adding e.g. 0.5 g t-butylperoxy-2-ethyl-hexanoate (e.g. 50% tert-butyl peroxy-2-ethylhexanoate solution in mineral spirits) to 100 g of resin.

Addition of a small amount of peroxide is recommended for applications that are cured with UV and require low residual styrene content. If small amounts of peroxides have been added to the resin, the final state of the cure may be optimized by post curing at elevated temperature (e.g. 80°C) for several hours, However, addition of the given peroxide to the resin would lower the self life.

Before use, the resin should be conditioned at 15°C minimum by use of a conventional curing system.

Storage Guidelines

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

Material Safety

A Material Safety Data Sheet 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.

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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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