Beyone™ 700-T-01 FC

Styrene-free Vinyl ester for hot cure CIPP/ Relining of drinking water pressure pipes

Beyone™ 700-T-01 FC is a thixotropic Styrene-free Vinyl ester resin used for CIPP/ Relining of drinking water pressure pipes. The resin is manufactured in line with GMP and can be cured through Hot cure.

The resulting liners enable to extend useful life of drinking water networks through their great mechanical strength and durability. Liners have been KIWA approved.

Benefits

- Suitable for renovation of drinking water networks
- Ultra-low VOC emission and low smell (Styrene-free)
- Fast installation through Hot cure
- Resin formulation in compliance with EU positive list (EC 10/ 2011)
- Safe to use, manufactured in line with Good Manufacturing Practice (GMP)

AOC Next® Product

Beyone™ 700-T-01 FC is styrene-free, resulting in ultra-low VOC emissions during processing and liner installation. For that reason it has received the AOC Next® Eco-label for Sustainable Products and Solutions.

Major Applications

Beyone™ 700-T-01 FC is a unique Vinyl ester resin, produced in line with Framework EU regulation 1935/2004 and compliant to EU Directive EU10/2011 and EU Regulation 1895/2005.

Beyone™ 700-T-01 FC is made to the highest quality standards according to Good Manufacturing Practice (GMP) regulations for materials intended to come in contact with food or drinking water (in particular) Commission Regulation (EC) 2023/2006.

The product has been especially developed for use in hot cure CIPP rehabilitation processes for pressure potable water applications and is compliant with BRL-K17201 and KIWA-ATA.

Product Specifications

Property	Value	Unit	TM
Appearance	Hazy		TM 2265
Acid value	0 - 0.8	mg KOH/g	TM 2401
Gel time	50 - 60	min	TM 2259, Physical
Peak time	55 - 75	min	TM 2259
Peak temperature	130 - 145	°C	TM 2259
Minimum pot life	100	min	TM 2301B
Viscosity	1750 - 2700		TM 2313, 23 °C, 2 s^{-1}
Viscosity	950 - 1350		TM 2313, 23 °C, 20 s^{-1}
Viscosity	750 - 1075		TM 2313, 23 °C, 250 s^{-1}
Viscosity	900 - 1300		TM 2313, 23 °C, 50 s^{-1}

TM2259 (60°C), TM2301B (50°C): 100 g resin + 1.0 g Cobalt accelerator (1%) + 0.8 g Di(4-tert-butylcyclohexyl peroxydicabonate + 1.0 g (TBPB) Medium reactive tert. Butyl peroxybenzoate

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Liquid resin typical properties

Property	Value	Unit	TM
Color	Yellow-brown		
Density	1118	kg/m³	TM 2160, 23 °C
Flash point	130	℃	TM 2800
Stability	6	Month	TM 2303, 25 °C, dark
Pot life	60	hrs	

Pot life, 23°C of mixture resin + 1.0 % Cobalt accelerator (1%) + 0.8 % Di(4-tert-butylcyclohexyl peroxydicabonate + 1.0 %(TBPB) Medium reactive tert. Butyl peroxybenzoate

Unfilled castings typical properties

Property	Value	Unit	TM
Tensile strength	65	MPa	ISO 527-2
Tensile modulus	2.9	GPa	ISO 527-2
Tensile elongation	3.4	%	ISO 527-2
Flexural strength	126	MPa	ISO 178
Flexural modulus	3.2	GPa	ISO 178

Cured with 1.0 phr Cobalt accelerator (1%) + 0.8 phr Di(4-tert-butylcyclohexyl peroxydicabonate + 1.0 phr (TBPB) Medium reactive tert. Butyl peroxybenzoate.

Cured for 1 hr at 60ºC and 5 h at 80ºC(*).

(*) Cure conditions can significantly affect the physical properties of the resin. Please refer to the application guidelines.

The resin should be stored indoors in a dry place at temperatures between 5 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 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 specialty formulations and solutions which enable customers to create robust, durable, and versatile products and components for applications in Coatings and Protective Barriers, Colorants and Visual Effects, Adhesives and Specialties, and conventional Composites. With strong capabilities worldwide 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.

Contact us for more information

We will help you to choose the right solution for your business.

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