AROPOL™ M 105 TA

Product description

AROPOL M 105 TA is a low styrene emission unsaturated polyester resin based on orthophthalic acid. Styrene emission under working conditions is reduced by up to 50% compared to standard resins. When working with AROPOL M 105 TA emission is only 2-5% of polyester resin usage whilst it is 5-10% from standard polyester resin. Excellent glass fibre wet out properties and easiness of application is characteristic for AROPOL M 105 TA.

AROPOL M 105 TA is a thixotropic and pre-accelerated unsaturated polyester resin with short gel time. Curing characteristics of AROPOL M 105 TA allows build up of laminate thickness 1-5 mm.

Applications

AROPOL M 105 TA resin is suitable for spray-up and hand lay-up methods for manufacturing numerous mouldings and is especially recommended for manufacturing of boats.

Properties

Liquid resin	Nominal value	Unit	Method
Acid value	19	mg KOH/g	ISO 2114
Brookfield viscosity at 23°C (RVT, sp2, 10rpm)	1200	mPas	ISO 2555
Cone&Plate viscosity at 23°C	180	mPas	ISO 2884
Styrene content	41	%	SFS 4864
Density	1.1	kg/dm^3	ISO 2811
Gel time at 23°C (1% high quality medium reactive MEKP-peroxide)	20	min	INTERNAL D006
Peak exotherm at 23°C (1% high quality medium reactive MEKP-peroxide)	120	°C	INTERNAL D006

Cured resin	Nominal value	Unit	Method
Hardness	45	Barcol	ASTM D2583
Heat Deflection Temperature (HDT)	66	°C	ISO 75/2 (A)
Flexural strength	90	MPa	ISO 178
Flexural modulus	4100	MPa	ISO 178
Tensile strength	55	MPa	ISO 527
Tensile modulus	3600	MPa	ISO 527
Elongation at break	2.0	%	ISO 527
24 h water absorption (50x50x4 mm sample)	19	mg/sample	ISO 62-80
28 d water absorption (50x50x4 mm sample)	92	mg/sample	ISO 62-80

Certificates and approvals

AROPOL M 105 TA resin is approved by Lloyd's Register, Germanischer Lloyd's and Det Norske Veritas for use in boat building.

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AROPOL M 105 TA

Product handling and use

It is highly recommended that all material is stored at stable temperatures under 20°C preferably indoors, and away from direct sunlight. Prolonged storage or storage outside of recommended conditions can influence liquid resin properties like viscosity and gel time. It is also strongly recommended to mix resin thoroughly before use. Shelf life of AROPOL M 105 TA is six (6) months.

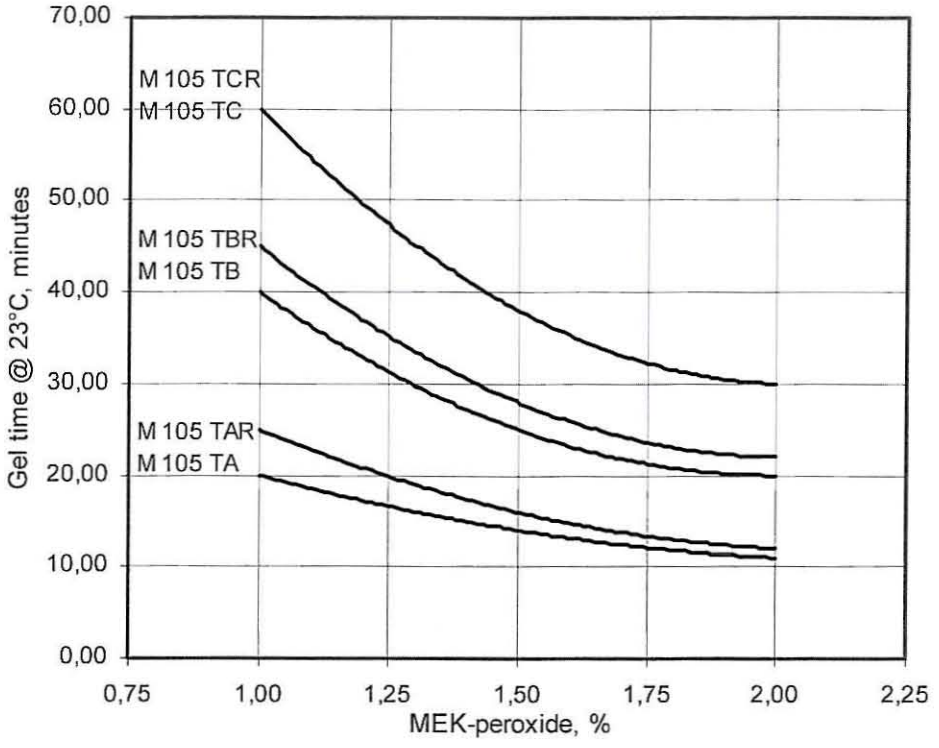
The user is responsible to familiarise with the material handling and safety datasheet prior to use of the product.

Certified quality

Products are manufactured and distributed by Ashland Finland Oy under a certified quality system conforming the requirements of the Quality System Standard ISO 9001 (2000), Environmental System Management Standard ISO 14001 (1996) and Occupational Health and Safety Assessment Series Standard OHSAS (1999) by Det Norske Veritas.

Supplementary data

AROPOL M 105 series includes several products covering broad gel time range as well as curing characteristics thus allowing selection of best product for each specific laminate construction. Graphs illustrate gel time properties at 23°C with MEK-peroxide for different AROPOL M 105 grades.



All facts and recommendations in this leaflet are presented in accordance with the best information available to us. They must not, however, be taken for a makers guarantee, because conditions prevailing by the customer can effect the properties of the end product.