

VINYLESTER resin ALFA-VIN-10-INF 8

TECHNICAL DATA SHEET

Description: ALFA-VIN-10-INF 8 is an unsaturated VINYLESTER resin dissolved in styrene and preaccelerated. ALFA-VIN-10-INF 8 resin does not contain catalysis indicator, nor does it contain waxes or paraffin of any kind and does not therefore pose delamination problems.

The resin has been approved by Lloyd's Register of Shipping.

Main fields of application: ALFA-VIN-10-INF 8 has been designed for RTM, RTM light and vacuum infusion applications.

Advantages: The special chemical composition of the resin and its low viscosity increase its compatibility with fibreglass. The long gel time makes it possible to produce large fibreglass-reinforced plastic pieces, where long injection times are required. ALFA-VIN-10-INF 8 also has a relatively low styrene content compared to standard resins, with a consequent lower environmental impact.

Main characteristics: ALFA-VIN-10-INF 8 has a rapid setting time, a low exothermal peak and low shrinkage. These characteristics allow good speeds when removing elements from the moulds, with a complete absence of cracks in resin build-up points.

ALFA-VIN-10-INF 8 gives the compound excellent mechanical resistance characteristics, excellent chemical resistance and resistance to osmosis.

Chemical and physical characteristics of liquid resin

Characteristics	Range	Unit	Method
Appearance ⁽¹⁾	Clear liquid		
Viscosity @25°C ⁽²⁾	100 ÷ 130	mPa-s	I.O. 368
Gel Time @25°C ⁽³⁾	40 ÷ 50	Minuti	I.O. 1000
Exothermal peak	155 ÷ 175	°C	I.O. 1000
Gel to peak time	10 ÷ 18	Minuti	I.O. 1000
Styrene content ⁽¹⁾	33 ÷ 37	%	I.O. 349

⁽¹⁾ Values not reported in COA

⁽²⁾ Brookfield RVF Spindle#2@20rpm

⁽³⁾ Catalysis Conditions: 100 g Resin + 1.50 g MEKP 50

Typical mechanical properties^(a) of cast unfilled resin^(b)

Characteristics	Value	Unit	Reference
HDT	95	°C	ASTM D 648
Tg	123	°C	DIN 53445
Tensile strength	81	MPa	ASTM D 638
Tensile elastic modulus	4,1	GPa	ASTM D 638
Tensile elongation	3,5	%	ASTM D 638
Barcol hardness	48	--	ASTM D 2583

^(a) Typical values only, not to be construed as specifications.

^(b) **Catalysis conditions:** 100g resin + 0,2 ml Co (6%) + 1,50 g MEKP 50.

Curing conditions: 24 hours at room temperature + 2 hours at 100 °C

Use: We recommend using the resin at temperatures of between 15 and 30 °C. Using a MEKP/AAP (Methyl ethyl ketone peroxide/acetyl acetone peroxide) blend makes it possible to obtain a lower gel time with a higher exothermal peak. Do not to blow air or other gases into the resin. Do not to mix with conventional resins.

Instructions before use: The resin must be conditioned to at least 15°C before use to obtain adequate catalysis when MEKP is used as a catalysis system. Shake resin well before use.

Storage instructions: The resin must be stored in original, sealed and intact containers, in a dry place and at a temperature of between 5°C and 25°C. The product's stability decreases at high temperatures and the resin's properties may change during storage. The storage times of unsaturated resins diluted in styrene may be significantly decreased when the product is exposed to light. Store in a dark place, in non-transparent containers.

Properties of pure liquid resin - Typical values

Characteristics	Range	Unit	Method
Stability at 65°C	Min. 6	Days	I.O. 375
Storage stability	Min. 6	Months	

Company Information: quality system certified by DNV according to standard UNI EN ISO 9001.

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The information contained in this datasheet is based on laboratory data and our experience. Gel time and rheological properties may change because of reactive nature of material. The mechanical values are purely indicative. We believe this information to be reliable, however we cannot guarantee its applicability in your process. We decline all responsibility for events that may arise as a consequence of improper use of the product. By accepting the products described herein, the user accepts the responsibility to thoroughly test any application before commencing production. Our advice should not be taken as encouragement to breach any patent, law, safety code or insurance regulation.