ORTHOPHTALIC Polyester Resin
ALFA-10-102 INF-ORTH.

TECHNICAL DATA SHEET

HPR *High performance resins*

Description: ALFA-10-102 INF-ORTH is a mixture of unsaturated polyester resin dissolved in styrene preaccelerated with cobalt salts.
The resin ALFA-10-102 INF-ORTH does not contain catalyst indicator. The resin does not contain waxes or paraffin of any kind and does not therefore pose delamination problems. However, after 3 days from setting, it is recommended to sand the coat to assure good interlaminar adhesion.

Main fields of application: ALFA-10-102 INF-ORTH resin has been designed for the production reinforced plastics with RTM, RTM light and vacuum infusion technique.

Advantages: The special chemical composition of ALFA-10-102 INF-ORTH increases compatibility with fibreglass and increases the flowing speed inside the mould.

Main characteristics: ALFA-10-102 INF-ORTH has a fast setting time and a low exothermal peak. These characteristics allow rapid removal of the pieces without cracks due to heat loss and shrinkage.

Chemical and physical characteristics of liquid resin

Characteristics	Range	Unit	Method
Appearance (1)	Clear liquid		
Viscosity @23°C (2)	100 - 130	mPa-s	I.O. 368
Gel Time @25°C (3)	43 - 48	Minuti	I.O. 1000
Exothermal peak	10 - 15	°C	I.O. 1000
Gel to peak time	140 - 160	Minuti	I.O. 1000
Styrene content (1)	40 - 44	%	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

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

Characteristics	Value	Unit	Reference
HDT	80	°C	ASTM D 648
Tg	100	°C	DIN 53445
Tensile strength	65	MPa	ASTM D 638
Flexural strength	120	MPa	ASTM D 790
Tensile elastic modulus	3,4	GPa	ASTM D 638
Flexural elastic modulus	3,5	GPa	ASTM D 790
Tensile elongation	2,5	%	ASTM D 638
Barcol hardness	45	--	ASTM D 2583

(a) **Typical values only, not to be construed as specifications.**
(b) **Catalysis conditions:** 100g resin + 1.50 g MEKP.
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	

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