

H30 – AZUR

Polyester Resin

■ CHARACTERISTICS

H30-AZUR is a pre-accelerated, unsaturated cold curing polyester resin with reduced styrene emission (environmental resin). It is a thixotropic orthophthalic resin with low viscosity for normal requirements. H30-AZUR hardens with 1 to 3 % MEKP hardener (see chart). The resin can be applied in wet on wet layers up to 7 mm thick. With glassfibre reinforcements it is ideally suited for hand lay-up or spray application. With filling materials it can be used as a casting resin. H30-AZUR contains special additives which reduce styrene emission. H30-AZUR contains a colour indicator to control the hardener addition. After the MEKP hardener has been added, the colour changes from blue to green within a few minutes. When half of the working time has passed the resin becomes clear transparent. H30-AZUR has a limited reaction temperature (peak exotherm) which enables thicker laminates to be made. Hardening at low temperatures is also improved.

■ AREA OF APPLICATION

H30 AZUR is used for glassfibre laminates, mould construction and as a casting material.

■ SPECIAL AREAS OF APPLICATION

- a) Glassfibre reinforcement: Parts for boat construction and repair, vehicle construction, coatings for tanks, covers for machine parts, furniture production and in the building industry.
- b) With filling materials: Polyester concrete, encapsulation of electrical wiring, casting materials for artistic works.

On wood, metal, brick and concrete surfaces, G4 is used as an adhesion primer.

■ PRODUCT DATA

Specification Liquid:

Colour	blue, transparent
Viscosity at 20° C (Brookfield)	900 - 1100 mPa.s, thixotropic
Styrene Content (B070)	ca. 40 %
Specific Weight at 20° C (ISO 2811-1974)	1.1 g/cm ³
Flashpoint (ASTM D 3278-95)	ca. 32° C
Refractive Index at 20° C	1.54
Shrinkage during the curing process	ca. 7 Vol.-%
Potlife at 20° C with 1 % MEKP (100 g Mix)	ca. 40 minutes
Shelf life in the tightly closed original container, stored in a cool and dark place	ca 4 months

TECHNICAL DATASHEET

Specification Cured:

	<u>Reinforced with 35 % Glass Fibre Mat</u>	<u>Not Reinforced</u>
Tensile Strength (ISO 527-1/2-1993)	130	55 N/mm ²
Tension E- Modulus (ISO 527-1/2 -1993)	12000	-
Elongation at Break (ISO 527-1/2 1993)	2.0	1.6 %
Impact Resistance (ISO 179 - 1993)	80 kJ/m ²	-
Compressive Strength	180	160 N/mm ²
Bending Strength (ISO 178 -1993)	220	95 N/mm ²
Bending E- Modulus (ISO 178 -1993)	9500	4100 N/mm ²
Dimensional Stability under Heat according to Martens (DIN 53 458)	-	80° C
Breakdown Voltage (50 Hz. 0.5 kV/s) VDE 0303, Part 2, 95 mm Ø; 1 mm (Minimum Value Dry)		200 kV/cm
Water Absorption after 28 days		0.6 %

These specifications have been made using cold hardened test plates that have been cured for 2 hours at 100°C after hardening at normal temperatures.

Provided that the laminates are post cured with heat H30-AZUR has good chemical resistance against water, low concentrations of acids and alkalis as well as white spirit and fuel oil at room temperature. After prolonged exposure to chlorinated hydrocarbons, low ketones and esters as well as hot water the resin can distort.

■ INSTRUCTIONS FOR USE

H30-AZUR is pre-accelerated and 1-3 % MEKP is thoroughly mixed into the resin before application. The working temperature should be between 18 and 25°C. The resin can be pigmented with the addition of up to 20% PU Pigment Paste. Using the hand lay-up method H30AZUR is normally applied with a brush or wool roller. The glassfibre mat or cloth is wetted out with H30-AZUR and de-aired with a metal disc roller. To provide a tack free surface on the laminate a coat of H30-NAUTIC polyester topcoat or polyester filler should be applied.

The consumption of H30-AZUR varies according to the weight of the glassfibre mat. To calculate the correct amount, you triple the weight of the glassfibre mat or one times the weight of the glassfibre cloth. Example: 900 g H30-AZUR is sufficient for 1 m² of glassfibre mat with a weight of 300 g/m².

Amount of Hardener

Wet Layer Thickness	MEKP-Hardener per kg Resin	Potlife
1 - 3 mm at 20° C	3 % = 30 g	ca. 20 minutes
2 - 4 mm at 20° C	2 % = 20 g	ca. 30 minutes
3 - 7 mm at 20° C	1 % = 10 g	ca. 40 minutes

If the laminate work is interrupted only 1 % MEKP should be added to the resin for the first layer. Only a small amount of resin should be used on the last layer of glassfibre. The laminate should be completed within 48 hours, otherwise the surface must be sanded.

TECHNICAL DATASHEET

■ SAFETY

The before mentioned technical data and information, especially the recommendations for applying and using our products, are based on our current knowledge and experience when applied under normal conditions. In practice, the materials, surfaces or site conditions are so different that no warranty regarding the working results or liability, arising out of any relationship, can be inferred neither from this information nor from a verbal consultation, except we are charged with intent or gross negligence. In this case the user is obliged to prove that he has informed us about all points required for a proper and promising judgement in writing, in time and completely. Patent rights of any third party are to be observed. Furthermore, our general sales and delivery Terms and Conditions and the latest Technical Data Sheet, which should be demanded, apply.

Directions for handling and waste disposal are in our Security Safety Data Sheet and the specifications of the Employers Liability Insurance Association for the chemical industry.