

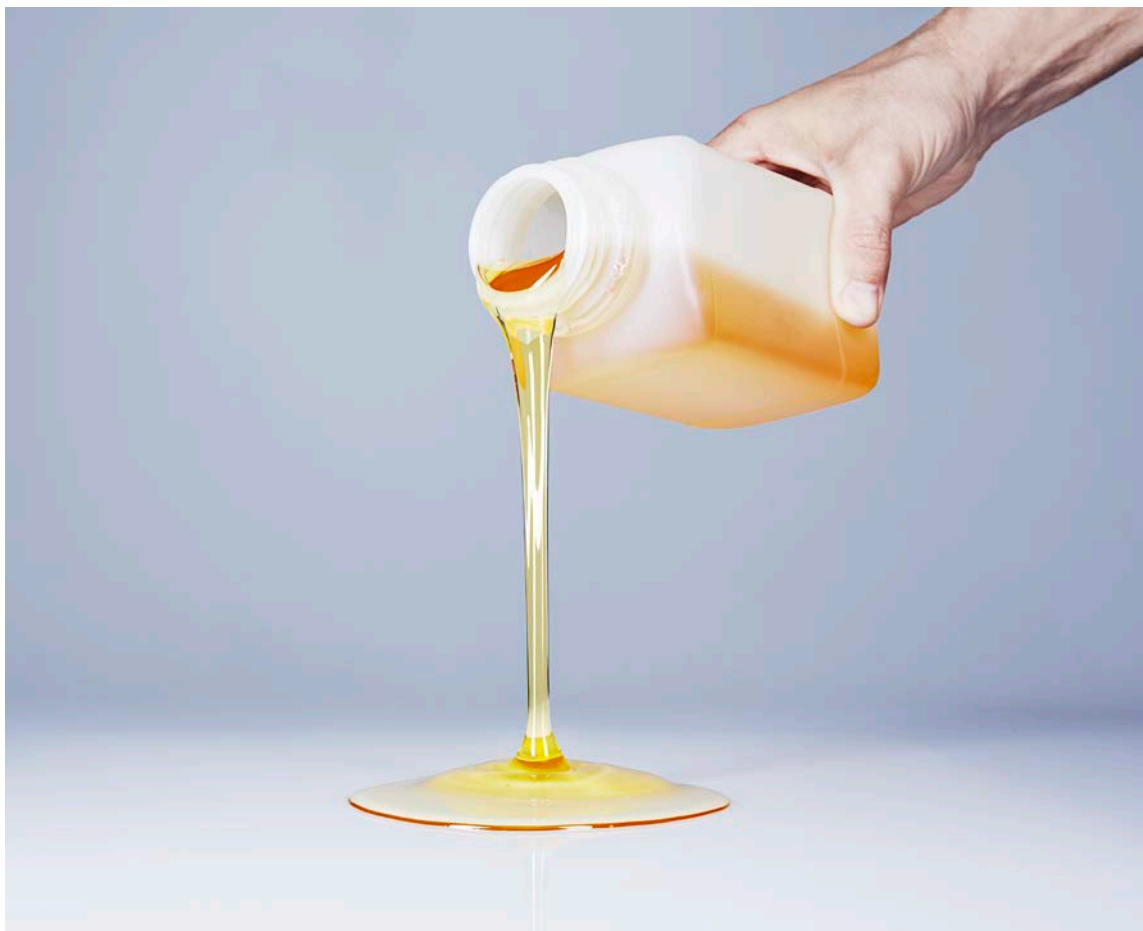


PRODUCT ANNOUNCEMENT: HIGH TEMPERATURE RESIN

ALWA HT RESIN

ALWA HT RESIN is a resin-based on isocyanate and epoxy (EP), which reacts after adding a catalyst. ALWA HT RESIN offers a range of possibilities for producers of fibre-reinforced materials (e.g., glass fibre, kevlar and carbon), semi-finished and finished goods. The system is also suitable for prepreg and reaction compounds. ALWA HT RESIN is particularly interesting for the aerospace and aircraft industry as well for the rail transport, automotive and electronics industry. The application area of "epic" resins are electro casting resins, lamination and injection technology (RTM procedure), vacuum infusion, casting and ramming compounds, impregnation resin, casting and injection moulding process as well as prepreg technologies, among others. ALWA HT RESIN is offered in two versions.

- 1) ALWA HT RESIN M100 with approx. 50 mPa s
- 2) ALWA HT RESIN M2200 with approx. 2200 mPa s



The resins can be mixed with one another which enables a flexible adjustment of the viscosity. In addition, two catalysts are available: one catalyst with a fast and one with a low curing rate. These can also be mixed together which allows a flexible adjustment of the pot life. After adding the catalyst, the material cures at room temperature. In that intermediate B-condition the material is very brittle. Three-dimensional networks are formed, which are characterized by a high density. That trimerisation is the prerequisite for the final mechanical values and consistencies. The tempering should be executed in stages up to 180 °C. After tempering a highly cross-linked duroplast is the result. ALWA HT RESIN is characterized by good electronic insulation properties. In addition, the mechanical and electronic characteristics are nearly temperature-independent. Moreover, it has a good chemical resistance to acids, alkalis and organic solvents. Quartz powder, microdol, short-glass fibres, graphite, quartz sand, corundum and aluminium powder can be processed with ALWA HT RESIN.

Attention: Before using the fillers, they must be dried or completely drained.

Due to the water and humidity sensitivity of ALWA HT RESIN, the material should be cast in a closed mould. The following materials are suitable as mould: polyethylene, polypropylene, aluminium and steel.

Outstanding properties:

- High glass transition temperature
- High distortion temperature
- Low thermal expansion
- Good chemical resistance
- Stable electronic insulation properties

Shelf life

ALWA HT RESIN should be stored at temperatures between 18 °C and 25 °C under complete exclusion of moisture influences. The resin crystallises at lower temperatures. The shelf life is approx. 6 months.

Technical data at RT:

Characteristic	Value
Glass transition temperature (TG)	> 280 °C
Dielectric strength	20KV/mm
Long-term heat temperature resistance	heat class H (IEC 216)
Coefficient of thermal expansion	approx. $65 \cdot 10^{-6}$ K ⁻¹
E-module	approx. 3500 N/mm ²
Bending strength	approx. 125 N/mm ²
Impact strength	approx. 15 kJ/m ²
Heat distortion temperature according to Martens	approx. 200 °C
Colour	yellow to brown