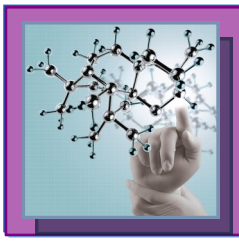

Thermosetting Vinylester Resins
High Performance Composites

SATT NORD
Technology Transfer Office

KEY WORDS

Vinylester resin

EB curing

High toughness

High Tg

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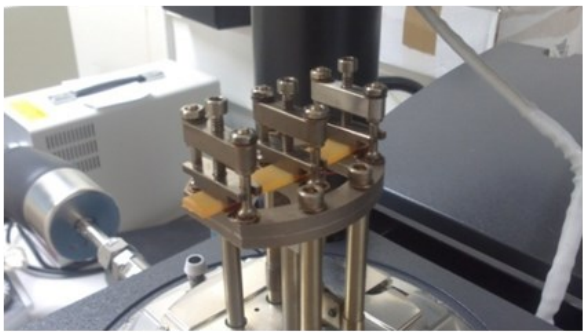
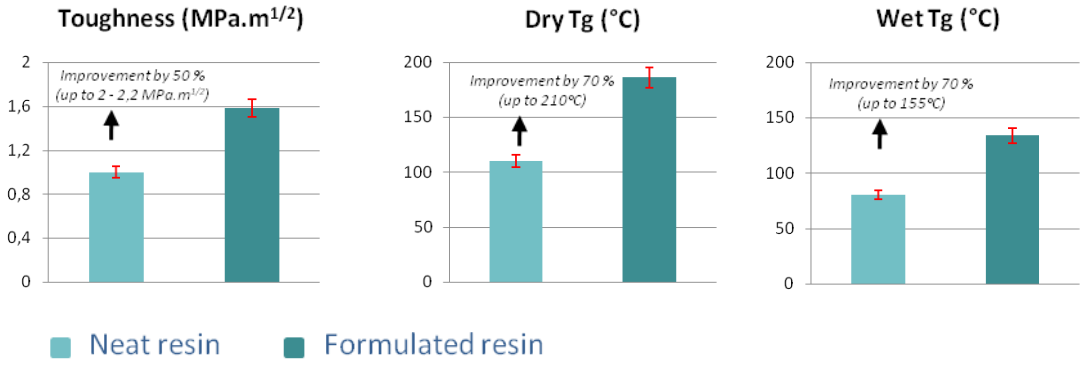
The technology is a high performance vinylester resin made up of acrylate monomers, high-Tg thermoplastic polymer and reactive solvent.
The use of a high-Tg thermoplastic polymer (polyethersulfone) into the formulation enables to get vinylester resins with enhanced mechanical and thermal properties (see graphs below).
The resin polymerisation is achieved by E-Beam.
Beam activation and higher curing speed.

Neat resin vs formulated resin





BENEFITS

- High toughness (up to 2.2 MPa.m$^{1/2}$)
- High dry and wet Tg
- High resistance to ageing
- Electron Beam Activation : high curing speed, curing of large composite structures
- Compatible with RTM process (viscosity below 1 Pa.s at 80°C)

APPLICATIONS

- Resins for composites in transport industry (aircraft, marine, railway…)
- Structural adhesives for composites

DEVELOPMENT STATUS

The preparation method of the resin is fully mastered.

INTELLECTUAL PROPERTY

- WO 2011042554
- WO 2013083567

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