

High performance modified epoxy resins

Materials / Industry / Composites



REFERENCE	LI-EPOXY [L1566]
KEYWORDS	MODIFIED EPOXY / HARDENER / COATING / COMPOSITE / IONIC LIQUID



APPLICATIONS

- Matrix for high performance composite parts (class IV composite parts)
- Resins for coating
- Structural adhesives
- Electronic parts protection



TARGET MARKETS

- Aerospace / Aeronautics
- Luxury / sport cars
- Electronics

Technology readiness level

TRL 3 - 4



INTELLECTUAL PROPERTY

Patent pending FR1654647, PCT application filed

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DESCRIPTION

A high performance epoxy resin has been developed, using ionic liquids as hardener, epoxy/thermoplast or epoxy/elastomer. Mix, we obtain a modified epoxy resin with higher toughness and better hydrophobic and thermal/fire properties.

COMPETITIVE ADVANTAGES

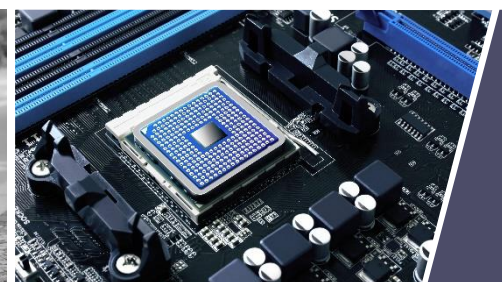
- Fracture toughness improvement of 40 to 140% vs. MCDEA amines
- Improved thermal degradation temperature by 40°C
- Improved fire resistance
- Decreased surface energy of 12%
- Green commercialized crosslinking agent (no subject to the REACH regulation) and available
- Same cost as conventional amines

DEVELOPMENT STATUS

- Various resins of epoxy + thermoplast + ionic liquid and epoxy + elastomer + ionic liquid have been developed
- Thermal / mechanical / fire / water resistance standard tests

PARTNERSHIP

PULSALYS is looking for industrial partners interested in a co-development, and/or in a licence agreement to use this technology.



OUR OPPORTUNITIES

www.pulsalys.fr/entreprise/offres-technologies/

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