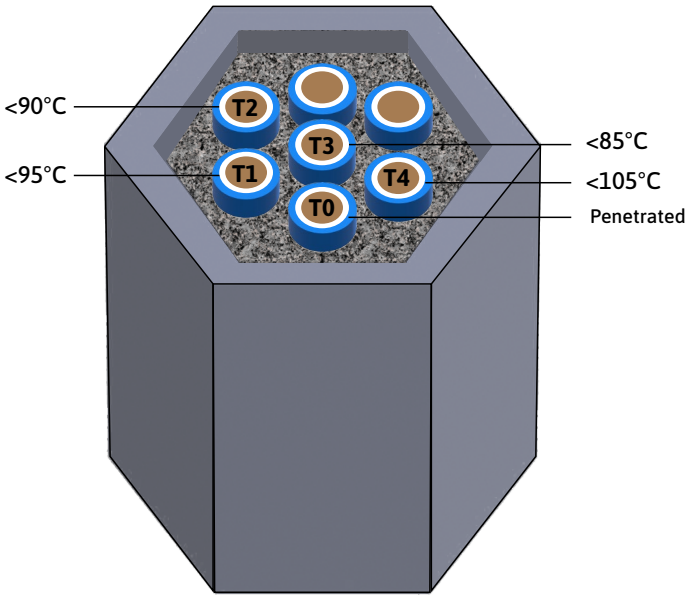
Electrolube® UR9001

Lightweight, Flame-Retardant Polyurethane Potting Foam

Electrolube® UR9001 is a lightweight foamed polyurethane, engineered to encapsulate and protect cylindrical-cell battery packs in two and three-wheel electric vehicles. Designed to provide robust vibration support and advanced fire protection, UR9001 effectively mitigates propagation risk in the event of cell thermal runaway.

The lightweight structure minimizes added mass to maximize vehicle range, while the halogen and phosphate-free flame retardant forms a resilient, intumescent char layer that suppresses fire spread, significantly enhancing overall battery safety.



Neighboring Cell Temperatures Following Nail Penetration of T0 to Induce Thermal Runaway

KEY FEATURES

- **Lightweight foam** with density under 0.2g/cm^3 reduces impact on EV range, supporting longer battery life
- **Halogen and phosphate-free** flame retardant protects against thermal propagation, meets UL 94 V-0 standard (certification pending)
- **Low mixed system viscosity** of < 2,000 mPa s ensures excellent flow into gaps as small as 1 mm for complete encapsulation
- **Soft, flexible structure** provides vibration support and impact damping, enhancing battery reliability
- **Finely dispersed, uniform closed-cell microstructure** resists humidity and harsh environments, extending product life
- **50% bio-derived content** supports sustainability without compromising performance

Electrolube®
Potting Compounds

MacDermid Alpha
ELECTRONICS SOLUTIONS

Electrolube is a product brand of MacDermid Alpha Electronics Solutions. © 2025 MacDermid, Inc. and its group of companies. All rights reserved. "(R)" and "TM" are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.

macdermidalpha.com