

Thermal and Acoustical Systems

Battery Insulators



Lydall's product line of battery insulators have proven performance to extend battery life by more than 25% by lowering electrolyte peak temperatures during vehicle operation in hot climates. These battery insulators are fluid, acid, temperature, and flame resistant and have been qualified through long-term durability at multiple OEM's who have selected Lydall's insulators to protect their batteries.

Applications:

- Underhood battery protection Custom fit to any battery size and installation

Features/Advantages:

- Reduces electrolyte temperature up to 25° C
- Available in three versions to match the customers performance, aesthetics, and cost expectations
- Designed to optimize fit, available space, and performance requirements.
- Effective in thermal soak, convection and radiation environments
- Reduces positive grid corrosion by high temperature battery acid
- Reduces battery acid leakage, minimizing nearby component damage
- Low-cost tooling and short lead times
- Material thicknesses from 6mm to 15mm

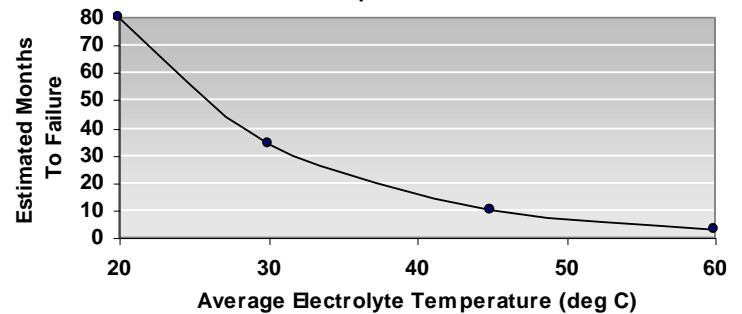
Battery Council International (BCI) Relates Expected Life to Temperature

Comprehensive study completed in early 1990's by SAE and Leading Battery Manufacturers correlated the annual Mean Electrolyte Temperature to Failure Rate.

BCI Findings

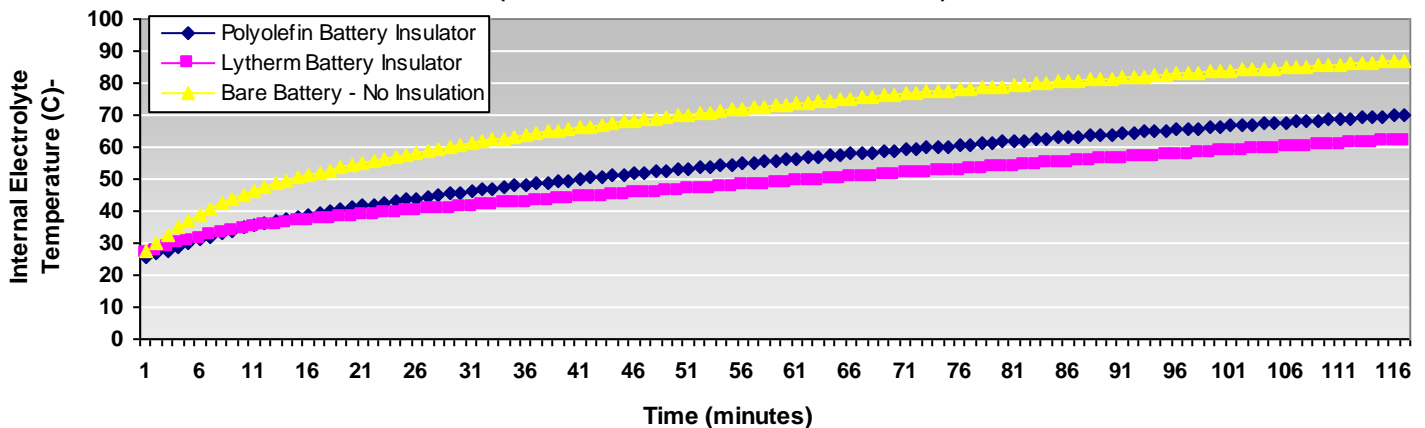
- A 10° C Reduction in electrolyte temperature results in an additional 12 Months of service life
- An 18° C Reduction in electrolyte temperature extends battery Life by 25%

Battery Life as a Function of Yearly Average Battery Temperature



Battery Insulator Thermal Performance
(120° C Oven Test – Soak Condition)

Battery Insulator Thermal Performance
(120° C Oven Test – Soak Condition)



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Battery Insulators



LyTherm® Based

Features:

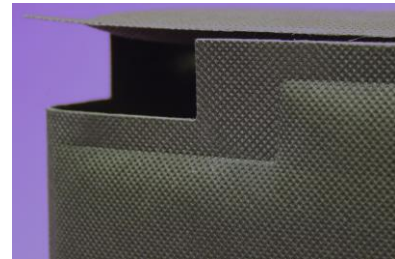
- Best thermal protection
- 4 or 5 sided design
- Appealing underhood aesthetics
- Sealed black acid resistant cover
- Insulation pads can be added or removed from sides
- Flexible and easy to install



Welded PET

Features:

- Good thermal protection
- 4 or 5 sided design
- Caution labels and Velcro® closure
- Appealing underhood aesthetics
- Pos/Neg identification
- Compression areas for clearance
- Acid resistant polyolefin exterior cover



Polyolefin Die Cut

Features:

- Low cost option
- Good thermal protection
- 4 or 5 sided design
- Acid resistant
- Gate cut corners for easy folding
- Velcro® closure and safety labels can be added
- Dark gray or black
- Durable

