

# LV Battery Insulation

The suite of low-voltage battery thermal insulation is comprised of several composites and designs. All products are comprised of non-glass, low thermal conductivity, fluid resistant materials validated for automotive Underhood applications. The designs are based on customer requirements and packaging space and can be 4 or 5 sided.

## Low thermal conductivity cores

- Lytherm® needled PET
- dBCore® thermal bonded polyolefin

## Designs

- 5-Sided: 4 surfaces + Integrated Top Cover
- 4-Sided: 4 surfaces
- Compression and sealing features

## Features

- Flexible and easy to install - quick single direction assembly
- Rapid launch: Concept to serial production
- Integration of labels
- Compression for improved packaging efficiency
- Aesthetic
- Highly resistant to aggressive underhood environments

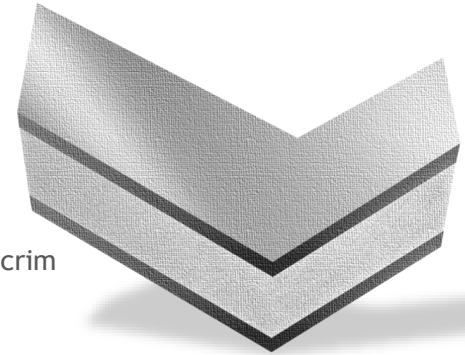
# Fiber Insulation

Integrated Thermal Protection in Multiple Forms

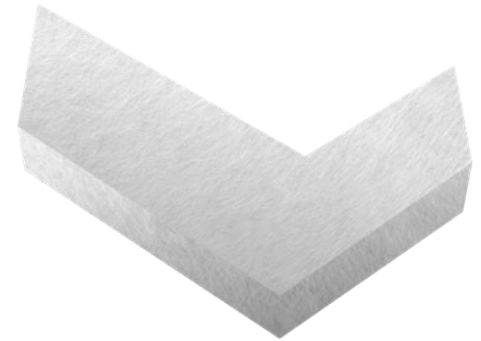
Durable + resistant scrim

Low thermal conductivity fiber

Durable + resistant scrim

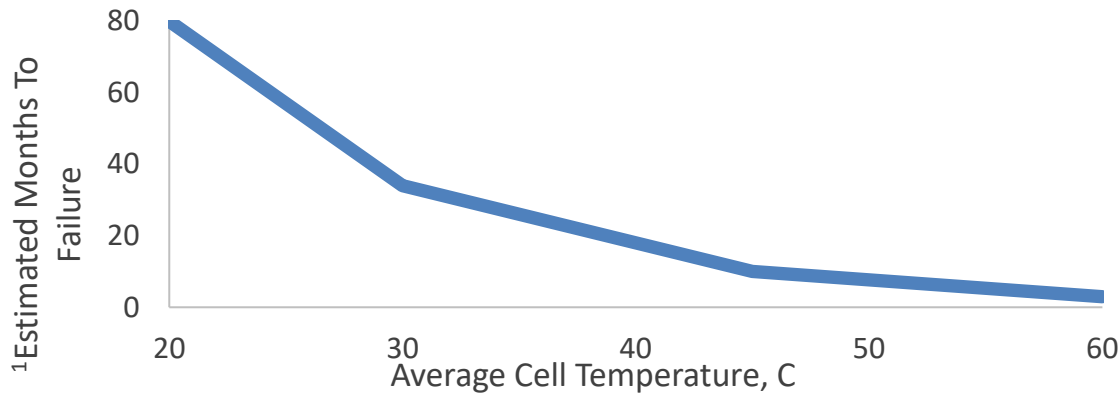


Low thermal conductivity fiber



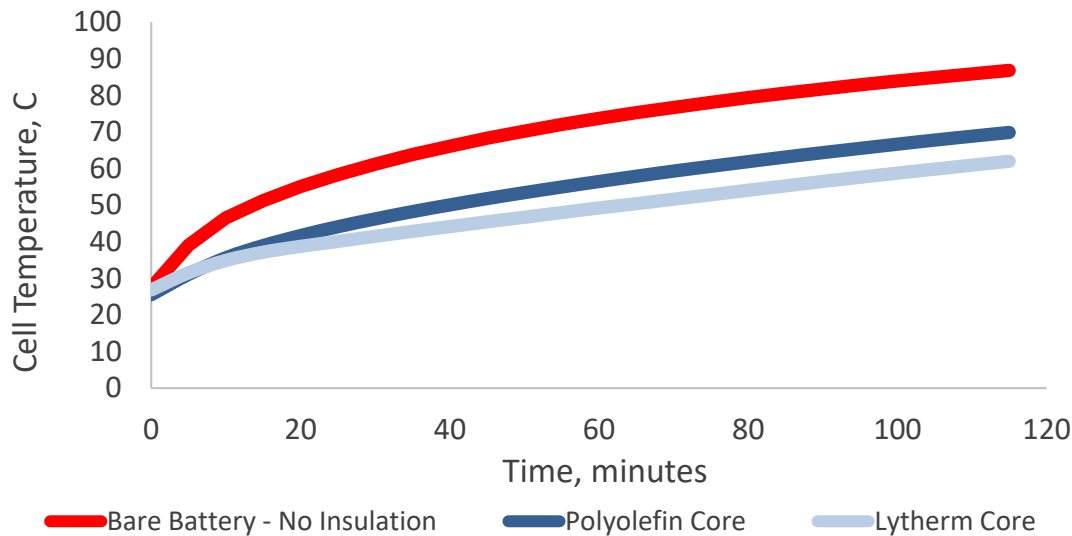
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## Fiber Insulation Integrated Thermal Protection in Multiple Forms



### Design Considerations

- An 18 °C reduction in cell temperature results in a 25% increase in battery life
- **Low tooling investment and lead times**
- Insulated battery thermal response 120 °C soak for 2 hours
- Average temperature reduction 0 to 1 hour: 13 to 18 °C
- Average temperature reduction 1 to 2 hours: 18 to 25 °C



<sup>1</sup>Data: SAE Battery Council International (BCI)