

Thermally Conductive Foam Technology

ID: 2015-030

Executive Statement:

This technology significantly enhances the thermal conductivity of traditional foam materials through the incorporation of short carbon fibers.

Technology Overview:

Developed by Brigham Young University (BYU), this invention introduces a novel approach to improving the heat dissipation properties of foam materials without compromising their inherent benefits. By integrating short carbon fibers into the foam matrix, the technology aims to transform foams from insulators into efficient thermal conductors, paving the way for their use in applications where heat management is crucial.

Key Advantages:

- Enhanced thermal conductivity compared to traditional foam materials
- Maintains the desirable properties of foam such as lightness and flexibility
- Applicable across a wide range of industries and products
- Supported by rigorous patent filings to protect intellectual property
- Backed by funding from reputable institutions like the National Science Foundation

Problems Addressed:

- Overcomes the inherent limitation of foam materials as thermal insulators
- Addresses the need for better heat dissipation in consumer products and industrial applications
- Improves user comfort and device performance by efficiently managing heat

Market Applications:

- Bedding and mattresses for cooler sleep environments
- Footwear for enhanced thermal comfort
- Sports equipment for improved heat management
- Computers and electronics for better thermal regulation
- Medical devices requiring controlled temperature conditions