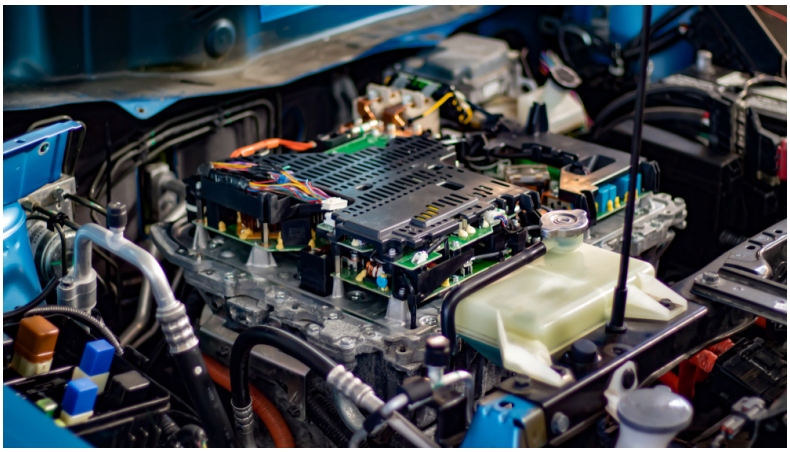
ROGERS CORPORATION
Elastomeric Material Solutions

APPLICATION SUCCESS STORY



ROGERS BUSBAR VIBRATION PAD

Rogers' PORON® 92 Polyurethane Damps Harmful Vibrations

The automotive industry has a common issue with various components that can generate noise, vibration, or both. Noise in a vehicle can cause a driver to suspect something is wrong with their vehicle, while vibration may loosen connections that ultimately lead to a problem. The Rogers portfolio of material solutions has products to address both issues.

CUSTOMER PROBLEM

An automotive OEM was searching for material to use as a vibration isolation gap filler in the assembly of their electric vehicle u-shaped busbars. The busbars would occasionally come in contact with other components within the battery. As such, a material was needed on the bend radius of the busbar to mitigate noise and vibration, as well as in other areas of the design for insulation, anti-shearing, and buzz, squeak, and rattle abatement. Rogers' team was able to quickly address the situation by providing the OEM design team with multiple polyurethane foam options and joining forces with a converter who could readily die cut the material into a variety of different shapes and sizes.

THE ROGERS SOLUTION

After evaluating these materials against those of the competition, the OEM chose Rogers PORON® 4790-92 polyurethane for the application due to the material's range of densities, varying thicknesses, CFD curves, and compression set resistance. PORON 4790-92 polyurethane is a slow rebound material with a very high mechanical loss factor, making it an excellent choice for any application requiring vibration damping. PORON 4790-92 also has a UL flammability rating designated under 94HBF, which was of particular importance to the OEM as operating conditions could subject the material to temperatures as high as 125˚C.

RESULT

The OEM selected PORON 4790-92 over both the previously used competitor's material as well as those from other material providers. The reputation of PORON material for its consistent performance under compression and the ability to secure the material in a tight time frame made Rogers the obvious choice for this OEM.