



APPLICATION SUCCESS STORY

ROGERS PROVIDES VENTING SOLUTION FOR ENERGY STORAGE SYSTEM

Rogers' DeWAL® DW232DV Material Selected as Venting Membrane for Home Energy Storage

Battery packs are widely used in the EV industry, but another market space in which they are prevalent is home energy storage. These batteries harness and store energy from natural sources, optimizing how and when our homes rely on the grid or battery power. Like the battery packs in EV systems, the packs for these home energy solutions often require venting systems to mitigate the risk of thermal runaway events and allow for pressure equalization in the housing. The Rogers DeWAL® portfolio of material solutions has several materials that address these concerns across all battery types, from EVs to home energy and all battery energy storage systems.

CUSTOMER PROBLEM

In the development of their battery energy storage solution, one OEM worked with Rogers to address the question of how they would manage venting in their product. The question led to a broader conversation about the benefits of different venting systems for pressure equalization and burst characteristics, and how these could improve the performance and safety of the OEM's battery packs. Through this conversation it was learned that battery pack's design was such that it required pressure equalization during normal operations and burst characteristics as a safety precaution during thermal runaway events. The OEM desired a single membrane that could provide both functions - rather than separate venting solution for each - as it was critical that the chosen solution be compatible with their broader custom designed venting systems. The Rogers unique and expansive portfolio of dual stage, pressure equalization and burst vents provided the OEM with both flexibility and a multitude of options.

THE ROGERS SOLUTION

Using its Venting Applications Lab, Rogers was able to perform a variety of custom burst tests to determine which material best fit the customer's application requirements. Based on test results, and the OEM's need for a single membrane, DeWAL® DW232DV porous PTFE membrane was selected as the best application choice for its ability to satisfy both the air exchange and burst requirements in a single solution. Additionally, the strong relationship Rogers has with its converting network enabled the transformation of the material into a final venting solution through custom cutting and application of zoned adhesive.

RESULT

Technical know-how, robust testing capabilities and outstanding service allowed Rogers to offer the customer a membrane solution that met their requirements and could be converted into a finished part.

ROGERS CORPORATION-ELASTOMERIC MATERIAL SOLUTIONS US 800.935.2940 | Europe +32.9.235.36.11 | Asia +86.512.6258.2700

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