

SOLVED BY SRP: **IDENTIFYING THE RIGHT GASKET MATERIAL TO RESTORE FUNCTION TO A GAS DETECTOR**



PREMISE

SRP contracted with Blackline Safety to fabricate a filter gasket for their G7 Multi-gas Detector Monitors.

Used by industries such as oil, gas and mining, this device detects up to seven types of harmful gases. The filter gasket was a critical part of the gas detection monitor because, not only did it allow the device to accurately detect harmful gases, it sealed out dust and moisture, keeping the device clear of contaminants so it would function properly. The filter gasket was made up of a microporous filter material adhered to a closed cell foam.

PROBLEM

The gasket material they were using, a closed-cell Neoprene blend foam, did not retain its thickness after being compressed in the enclosures housing the sensors.

In other words, the foam material took a compression set, and needed to be replaced every time the enclosure was opened to replace the sensors.

The material didn't bounce back to original thickness, meaning it could let in moisture, dust and other unwanted contaminants.

In addition to that, the neoprene blend material wasn't meeting impact resistance requirements. As a result, the gas detector device would malfunction due to seal failure as well as impact damage.

It turned out this material had many shortcomings for this use, which creates a host of risks and exposures Blackline would want to avoid in any circumstance: worker injury, recalls and litigation, and negative publicity.

SOLUTION

After identifying the core shortcomings of the original gasket material, SRP leveraged its longtime preferred partnership with ROGERS to identify the best replacement for the gasket material.

The SRP team was quick to identify a stronger, more compression-set resistant material — with the right density that would stand up to impact. Then, they fabricated it into a new gasket seal prototype for Blackline to test on the Blackline G7 device.

Rogers PORON® 92 formulation had the best combination of softness, impact absorption and compression force deflection — all the required properties to maintain a seal in the Blackline G7 Multi-gas Detector Monitors. The PORON was highly effective at sealing out dust and moisture, reducing transmitted force from impact, and maintaining original thickness to create a long-lasting seal.

RESULT

The result was a better, more durable and higher performing gasket that was also cost-efficient, without creating a setback on Blackline's timelines.

Thanks to SRP's agility and resourcefulness, the PORON® 92 formulation polyurethane foam eliminated concerns about product failure. Workers rely on this gas detector to prevent injury and death from inhaling poisonous gases.

Products with components that work as they're supposed to will greatly reduce the company's risk of litigation, product recall, along with any negative publicity that's associated with these events. This makes the partnership with SRP well worth the investment.



SRP is an independent fabricator of elastomeric materials that clients have trusted with projects since 1951.

Our preferred partnerships with 3M and ROGERS give you access to the best materials and are backed by our technical expertise to solve your toughest challenges.

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