

Food & Beverage

Case Study: Improving Safety in Explosion Vent Panels

Explosion vent panels are critical components in various industrial infrastructures such as silos, factories, and containers.






These panels are designed to mitigate the impact of explosions by evacuating pressure, flames, and dust, thereby protecting both people and equipment. A robust and reliable sealing solution is essential for the proper functioning of these panels, particularly in explosive atmospheres.

The Opportunity & Challenge

A leading industrial safety company required a dependable material for gaskets used in explosion vent panels. The challenge was to find a gasket material that could withstand extreme conditions, while maintaining performance in food storage silos, hoppers, filters, and cyclones.

The material needed to ensure a secure seal to prevent any leakage of pressure, flames, or dust during an explosion. kSil® FDA Medium closed cell silicone sponge sheeting emerged as the perfect solution due to its unique properties and compliance with stringent safety standards.

Key Benefits of kSil® FDA Medium

-  **In-House Formulation:** Fully FDA white-listed ingredients are mixed onsite to meet stringent food safety standards.
-  **Superior Material Cell Structure:** Ensures better performance and reliability under extreme conditions.
-  **Enhanced Lead Times:** Standard 25 working days with the flexibility to service urgent requirements.
-  **Full Batch Traceability:** Provides complete transparency and quality assurance for every batch produced.
-  **EC 1935/2004 and BfR Compliance:** Adheres to European food safety regulations, ensuring safety and reliability.



The Solution: **kSil**® FDA Medium

The kSil® FDA Medium closed cell silicone sponge sheeting was die-cut to create gaskets specifically designed for explosion vent panels. These gaskets were then applied to the panels used in various industrial settings, including silos, hoppers, filters, and cyclones.

The material's superior sealing properties ensured that the panels could effectively evacuate pressure, flames, and dust during an explosion, thereby protecting both personnel and equipment.

The implementation of kSil® FDA Medium significantly improved the safety and reliability of the explosion vent panels. The gaskets provided a secure seal that withstood extreme conditions, ensuring the panels functioned optimally during an explosion.

The durability and compliance with safety standards of kSil® FDA Medium also ensured long-term performance, leading to cost savings for the client.

