

Delphi Gum Based Silicone Rubber Sealing Components

Delphi Gum Based Silicone Rubber Sealing Components are an extension of Delphi's product offerings beyond the standard liquid silicone rubber (LSR) technology currently being used. The wide array of Delphi Gum Based Silicone Rubber Sealing Components includes block seals, grommets, cable seals, housings, and more. Delphi's expertise with advanced sealing materials and manufacturing machines includes using a gum based silicone rubber material process. The components are manufactured with unique processing methods, developed in Delphi's Wuppertal, Germany manufacturing facility.

Offering a high cut resistance and eliminating the need for manual vision control, gum based silicone rubber components are an expansion of Delphi's current sealing choices, enabling increased quality and cost savings. This technology also supports the development for advanced products with a mechanical pierce in the subsequent processing, including Delphi's small gage cable sealing system and flexible printed circuit (FPC) sealing technology.

► Benefits

- High performing, gum based silicone rubber material
 - High cut resistance
 - High tensile strength
 - Low compression set at aging
- Capable of producing fluor silicone rubber materials
- Increased quality
 - No manual vision control needed
 - Less scrap
- Cost savings
 - Elimination of manual vision control
- Large, diverse product portfolio

► Typical Applications

Delphi Gum Based Silicone Rubber Sealing Components are designed for sealing applications in the automotive, industrial and medical markets, driven by the material characteristics and requirements needed.

Specific components include the following:

- Block seals
- Grommets
- Cable seals
- Housings
- Etc.

Custom designed solutions are also available for customer specific applications.



Block seal



Grommet



Single wire seal



Housing

▶ **Material Benchmark Comparison**

	New Silicone Gum Based Rubber	Liquid Silicone Rubber	Standard Gum Based Silicone Rubber
Cut resistance	++	○	○
Compression set	++	+	+
Temp Resistance	++	++	+
Potential part complexity	++	++	○
Cycle Time	+	++	-
High volume production capability	+	++	+

▶ **The Delphi Advantage**

- Diverse and extensive automotive portfolio
- In house design, process, tooling and manufacturing expertise
 - Liquid silicone fluor material currently in production
 - Both gum based and liquid silicone production capability
 - 2 shot molding technology available
 - 10K particle clean room in Wuppertal, Germany
- More than 20 years' experience in LSR technology
- More than 4.5 billion LSR components produced yearly on a global basis



Production of Delphi Gum Based Silicone Rubber Sealing Components in Wuppertal, Germany facility, which uses a different process from liquid silicone rubber.