



**SILICONE -  
HYGIENIC &  
DURABLE**

## SILICONE - THE STAR AMONG ELASTOMERS

Silicone is a truly multi-talented material! Many revolutionary products have been created because tried-and-tested materials have been replaced by silicone. As a result, completely new product benefits have come to light.

Silicone is now an indispensable material for everyday components.

## SILICONE FOR THE LIFE SCIENCE INDUSTRY

Silicone injection molding offers the following advantages for the life science sector due to its special properties:

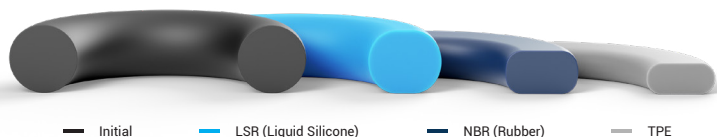
**Biocompatibility:** This means that it is not toxic or harmful to the human body. This means there are no allergic reactions - according to USP Class VI/ISO 10993 for applications in the medical and food industries.

**Easy Sterilization:** This is of great importance in medical technology. It can be sterilized with steam, ethylene oxide, gamma and E-rays without affecting its properties.

**Flexibility:** Silicone is extremely flexible and can be easily molded into various shapes. It also exhibits long-term temperature stability (-50°C to 180°C) and resistance to breakage despite this same high elasticity (stretchable up to 1,000%).

Our in-house cleanrooms are certified to ISO 14644-1 Class 7 & 8 (defines the number of particles in the air) and GMP Class C or D (defines the number of germs in the air).



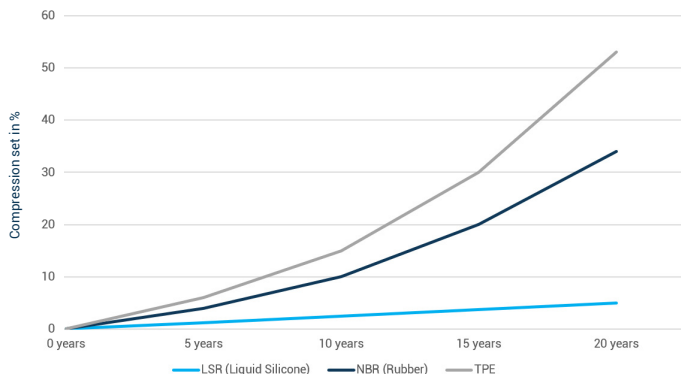


## PERMANENT DEFORMATION

Silicone is extremely elastic and malleable. These properties make the material ideal for seals where long-term tightness is required.

When a silicone gasket is subjected to permanent pressure within a temperature spectrum of  $-40^{\circ}\text{C}$  to  $80^{\circ}\text{C}$  under normal environmental conditions, the material properties come into their own. Changes in pressure deformation are virtually unmeasurable.

Compression set over time:



In comparison, rubber or TPE are much more susceptible to permanent deformation. As a result, molded parts made of these materials have to be replaced in much shorter cycles.

Multi-component injection molding, e.g. silicone/metal, additionally saves assembly steps and offers technically perfect sealing properties.

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