

TECHNICAL INFORMATION

MATERIAL STORAGE CONDITIONS SHELF LIFE

GENERAL INFORMATION

The following guidelines and recommendations apply for the storage of semi-finished products and seals made of:

- POLYURETHANE grades** (CPU, TPU Elastomers)

- RUBBER grades** (Elastomers)

- POM, PA, PTFE grades** (Plastomers)

The characteristics of elastomer and plastic products can on one hand be damaged by chemical reactions which are caused by the influence of heat, light, oxygen, ozone, humidity and various chemicals on the material, and on the other hand by physical processes.

These physical processes, called “physical ageing”, are either caused by the influence of external tensions leading to cracks and permanent deformation, or by the migration of plasticizers from products which make the materials more brittle and leads to deformation of the parts.

Therefore, rubber products will only maintain their characteristics without major changes for several years, if proper storage is ensured. In this context, it must be said that ageing and storage properties of rubber products depend considerably on their chemical structure.

Unsaturated elastomers, such as nitrile rubber (NBR) age much quicker under improper storage conditions than saturated elastomers, such as fluororubbers (FPM). The ideal characteristics of these products can only be maintained for longer periods of time, if the products are stored in accordance with the following recommendations of DIN 7716.

STORAGE CONDITIONS FOR ELASTOMERS AND PLASTIC MATERIALS

- Rubber and plastic products should be stored in a cool and dry environment. Storage temperature should be around 15°C and not exceed 25°C; relative humidity should be less than 65%.
- Rubber and plastic products should not be exposed to light above all direct sunlight and artificial light with a high UV content (bulbs to be preferred to neon lamps).
- The storage rooms must not contain any ozone-producing devices, such as electric motors and high-voltage devices.
- Rubber products should not be exposed to draft. This can be ensured by using airtight packaging which must not, however, contain plasticizers, Polyethylene is most suitable for such purposes.
- Contact between rubber products of different compositions is to be avoided.
- Contact between rubber and plastic products and chemicals and/or dangerous metals (e.g. copper, manganese) is to be avoided.
- Rubber and plastic products should be stored as tension-free as possible, i.e. the parts should not be subject to tensile, pressure or bending deformation. Rubber products, above all seals, must not be hung on nails or tightly folded or rolled for reasons of space.

If all these recommendations are observed, semi-finished products and seals can be stored for the periods of time indicated below, without losing their typical properties:

H-PU, H-PU, SH-PU, XH-PU, XSH-PU

approx. 12 years

PU, LT-PU

approx. 7 years

NBR

approx. 5 years

EPDM, H-NBR

approx. 8 years

**FKM, SILICONE
POM, PA**

approx. 10 years

PTFE-virginal, PTFE-filled grades

approx. 12 years

REMARK

The aforementioned instructions, recommendations and guidelines are according to our best knowledge. We can, however, not accept any guarantee and / or liability in this respect.