TECNO PLAST Storage instructions/recommended values for storage times and periods of use PTFE – hoses and hose assemblies

In the following we want to provide our customers with guidelines which enable them to avoid adverse effects on our products in order to ensure a long usability of our products.

A) Storage instructions
When storing our products, the ISO 2230 and DIN EN ISO 8331 norms must be complied with.

We draw particular attention to the following points:
1. Stockroom exchange based on a first-in first-out method
2. Stockroom temperature below 25°C (not below minus 30°C)
3. Relative humidity not over 70%
4. Protection from direct sunlight and UV radiation
5. Preventing the formation of ozone
6. Preventing harmful effects from specific products and their vapours, e.g. disinfectants, solvents, etc.
7. Preventing negative influences from electric and magnetic fields

Storage methods:
Storing the products outdoors is not permitted.

The PTFE hoses and hose assemblies should be stored separately from other products, in closed but moderately ventilated rooms and on a dry surface on shelves or in storage boxes/barrels. For such storage methods, the following points should be noted:
1. The radius of any bend must not exceed the pertinent minimum bend radius
2. Products lying underneath other products must not suffer deformations due to the weight of the products on top of them
3. The hose fittings must not push in or damage the hoses

Hanging hose coils on hooks is not recommended. Hose assemblies can be hung up for storage. If the hose assembly is hung up by its fitting, care should be taken to ensure that the join is not damaged due to the hosepipe’s own weight.

Ensure that the items are protected against rodent attacks.

B) Recommended values for storage times
When complying with the abovementioned storage instructions, the following guidelines for storage times apply for the various materials used in our products:

- **PTFE** = unlimited
- **Stainless steel** (fittings, ferrules, braid and wires) = unlimited
- **Polypropylene** (fittings and braid) = 10 years (the colours may bleach)
- **Kynar/Aramid** (braid) = unlimited
- **Hastelloy** (fittings and meshes) = unlimited
- **Silicone** for the cover = 10 years*
- **EPDM – rubber** for the cover = 10 years*

* storage time for temperatures from 10 °C to 25 °C. A storage time of up to 20 years can be achieved at storage temperatures below 10°C. Storage at temperatures below minus 30°C is not permitted.

The storage time is 10 years for hose bundles made out of PTFE-liner, stainless steel mesh and silicon covers. In each case, the material with the shortest storage time is decisive for the recommended values.

The abovementioned storage times are non-binding recommended values for optimum storage conditions. No guarantee or prolongation of the warranty period is associated therewith.

The customer is responsible for inspecting the products for damage caused by the storage before starting to use them.

C) Recommended values for periods of use
As a matter of principle, hose assemblies manufactured by TECNO PLAST are subjected to leakage testing, an electrical resistance test and an optical test before they are delivered. Corresponding certificates pursuant to DIN EN 10204 - 3.1 will be issued upon request.

If the hose assembly has been stored for longer than 3 years, it should be subjected to another test pursuant to T002 (DGUV 213-053) before being used.
STORAGE INSTRUCTIONS

PTFE-hose assemblies have a high aging resistance. There are hose assemblies which have been in use for more than 10 years. We are even aware of cases in which our CORROFLON-PTFE-corrugated hose assemblies are in service without complaint for more than 20 years.

Actual use times may vary. TECNO PLAST can only make reliable statements about the probable service life of the above-mentioned products if it has precise knowledge of all of the relevant information about the specific application.

Examples for an adverse affect on the product’s service life in the pharmaceutical industry are the usual cleaning methods.

Usually, the BIOFLEX ULTRA/PHARMALINE N product is equipped in the pharmaceutical industry with an RC = (EPDM) – or SI = silicon rubber-cover, in order to avoid the problematic cleaning of the pressure-bearing element (stainless steel mesh) which would otherwise be found on the outside. Repeated sterilisation in the autoclave can adversely affect these covers and therefore shorten the service life of our products. TECNO PLAST can only make reliable statements about the maximum number of allowed cleaning- and/or sterilisation-cycles if it has precise knowledge of all of the relevant factors regarding the applied cleaning method (duration, temperature, steam pressure, etc.).

It is the customer’s responsibility to assess the risks of a hose failure, including the consequences to be expected, and to take suitable measures to protect its employees, and if necessary the public.

Malfunctions can be prevented through correct handling and suitable installation conditions. In this respect, we refer to the operating instructions, use conditions and hose configurations with installation information in our catalogues, which must be complied with by the customer. This data can also be accessed on the Internet at www.tecnoplast.de.

For the sake of precaution, we recommend having an inspection carried out at least once a year in accordance with T002 (DGUV 213-053) with an additional endoscopic examination of the lined hose by a qualified person or under the supervision of a qualified person.