Chemical Resistance List for Polybutylene (PB)

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General

The Chemical Resistance List is only intended as a guide. Changes in the composition of the medium or special working conditions could lead to deviations. If there is any doubt, it is advisable to test the behaviour of the material under the specific operating conditions.
No guarantees can be given regarding the information contained in this manual. The data is based on the information available at the time of printing.
It will occasionally be revised in the light of subsequent research and experience.

Classification

The customary classifications, **resistant, conditionally resistant** and **not recommended** are depicted by the signs **+**, **O** and **–** repectively . This makes presentation and application easier. These classifications are defined as follows:

Resistant: +
The material is not significantly affected by the medium within the acceptable operational limits of pressure and temperature.

Conditionally resistant: O
The medium can be aggressive to the materials or causes swelling. Restrictions must be made regarding pressure and/ or temperature, taking the expected service life into account. The service life can be noticeably reduced. Further consultation with George Fischer is recommended.

Not recommended: –
The material cannot be used with the medium, or only under special conditions.

Pipe Joints

Fusion Joints
In the case of PB, fusion joints have practically the same chemical resistance as the pipe material. However, for media which could cause stress cracking, the fusion joints can be susceptable to increased residual stresses.

Flange and Threaded Unions
For flange and threaded union connections, the material of the sealing element must be considered.

Sealing Materials

The life expectancy of sealing materials can differ greatly from that of the pipe material determined by the operating conditions and stress involved.

Material:
EPDM
Ethylene-Propylene-Rubber

Good ozone and weather resistance, potable water quality. Especially suitable for aggressive media. Not recommended for oils and fats. Temperature, 90 °C constant, 120 °C short-term.

NBR
Nitrile-Rubber

Good resistance to oils and gasoline. Temperature, 90 °C constant, 120 °C short-term.

Chemical Resistance Lists
Can be made available upon request or visit www.georgefischer.co.uk

Metallic Materials

The metallic materials mostly used in INSTAFLEX systems are:

Brass (Ms)
according to DIN 17660
in the quality
CuZn 39 Pb 3
and
CuZn 39 Pb 2

Bronze
according to DIN 1705
G-CuSn 5 Zn Pb

Stainless Steel
according to DIN 17455
12 NiCr 18/8

These materials correspond to the requirements for potable water installations according to DVGW and SVGW Guidelines.

For other, non-domestic potable water systems, the use of these materials should be checked.