TECHNICAL DATA SHEET

fluteck P EX100

(Expanded Polythetrafluoroetilene)

| Property | Method | Units | Specification |
|------------------|----------------|-------------------|---------------|
| Specific gravity | EN ISO 13000-2 | g/cm ³ | 0,500 - 0,700 |
| Flamability | UL 94 | | V-0 |
| Water absorption | ASTM D570 | % | 0,01 |

Gasket Sheets are made from 100% pure, multidirectional fluteckTM P EX100 with higher density. It consists solely of highest grade PTFE resins that offer an almost unlimited chemical resistance. During installation, gaskets made from fluteckTM P EX100 sheets, adapt perfectly to flange roughness, unevenness and usual irregularities of used flanges.

In service, stressed with temperature cycling and external forces, fluteckTM P EX100 keeps high gasket stress and forms an optimum thin gasket with high blow-out safety. With fluteckTM P EX100 sheet gasketing you can cover a wide range of metal flange shapes in demanding aggressive surroundings. For the use in high purity applications fluteckTM P EX100 sheets with ink- free marking are available on request.

Properties:

• Easy manufacture into all gasket shapes; suitable for high temperatures; higher rigidity and stiffness; highly conformable to the sealing surface; reliably tight and blow-out safe; resistant to ageingreduces service and operating costs

Main applications:

• Large diameter standard flanges, piping systems, apparatus flanges, complex geometries, steel flanges and high grade FRP components. Highly agressive chemicals, all media in food and pharma applications.

Service Temperature

- Excellent resistance to continuous service temperatures up to 260° C and, for limited periods, even to higher temperatures; the low temperature resistance of the product allows satisfactory performance at as low –200°C.
- Recommended Operating Range

Vacuum to 40 bar at -240°C to +260°C, depending on the individual application up to 200 bar.

Chemical resistance

• PTFE possesses a high inertness towards nearly all known chemicals (Ph 0 to 14). It is only attacked by elemental alkali metals, chlorine trifluoride and elemental fluorine at high temperature and pressures.

Solvents resistance:

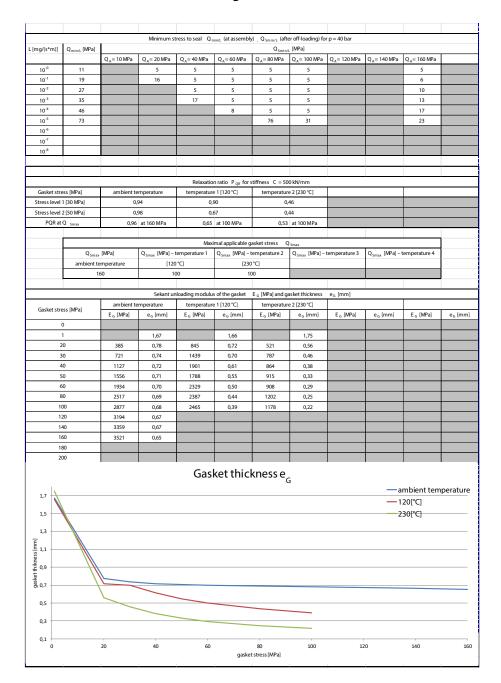
• PTFE is insoluble in all solvents up to temperatures as high as 300° C (572° F). Certain highly fluorinated oils only swell and dissolve PTFE at temperatures close to the crystalline melting point.

Tests and Certificates

- FDA approved (Code of Federal regulation 21 CFR Ch.1; sections 177.1550 "Perfluorocarbon Resins" of the Food and Drug Administration/ USA
- TA-Luft (VDI 2440) up to 230°C and VDI 2290 @ 40bar He
- Blow-Out-Safety according VDI 2200
- BAM for gaseous and liquid Oxygen
- EC 1935 and relating regulations for extraction limits and GMP

Material Properties fluteck[™] P EX100 ePTFE Gasketing (2mm)

EN 13555



Design Constants AD -Merkblatt / ASME / ASTM

| $R_z \le 6.3 \square m$ | p ≤ 10 bar | p ≤ 16 bar | p ≤ 40 bar | p ≤ 60 bar |
|---------------------------------|----------------------|----------------------|----------------------|----------------------|
| k ₀ * k _D | 10 * b _D | 15 * b _D | 25 * b _D | 35 * b _D |
| k1 | 2,5 * b _D |

| m-factor: | 2,0 |
|---------------------------|------------------------------------|
| y-stress [psi]: | 2800 |
| | |
| Compressibility: | 55 - 60 % |
| Recovery: | 14 % |
| | |
| Creep Relaxation: | 15 % @ 23°C (73°F) |
| | |
| Temperature Resistance of | -250°C - +260°C (-420°F - 500° F) |
| the sealing material: | |











Date: 02/2017