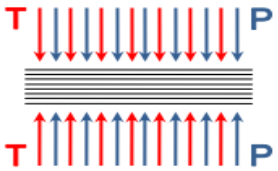
coestan
SEALING TECH

DATA SHEET

EXPANDED PTFE SHEETS

CHARACTERISTICS

Our Expanded PTFE Sheets are made from 100% pure multidirectional expanded PTFE, through unique technology for forming of special febrile structure with extreme mechanical strength and sealing parameters. Our e-PTFE sheets, manufactured through the only technology in the world providing the following advantage to all known production methods - during production the force, binding the individual layers, and the processing temperature are equally distributed throughout the full surface of the sheet. This guarantees excellent superior sealing properties of the finished product



APPLICATIONS

Material is used for flange sealing in wide range of media like oils, petrol water, acids, etc. at temperature up to 260°C /peak temperature 315°C/. It is chemically inert against the most aggressive acids, except molten alkali metals and elemental fluorine. Sheets are used for cutting of gaskets and seals for fragile surfaces as glass, ceramic or glazed flanges. During the
bolt tightening process of such flanges it is possible that they are damaged or broken in case the gasket is not soft enough.

Therefore, PTFE gasket sheets are preferred material for usage when there is risk of breaking the surface of the sealed parts. It is performing as an excellent decision for sealing of irregular surfaces, filling even smallest unevenness.

ADVANTAGES

Our Expanded PTFE Sheets are innovative material with perfect seal properties, which fully eliminates the effect of "cold flow". This guarantees long and reliable life of gaskets. Sheets are flexible, they can easily take the shape of sealed surface, which gives them big advantage for damaged flanges. Suitable for food and pharmaceutical industry, widely used in petrol, gas and chemical industries.

CERTIFICATES AND APPROVALS:

- ✓ ***TA Luft VDI 2440**, high-grade sealing product for the purposes of TA Luft*
- ✓ ***DIN 28090-1***
- ✓ ***EN 13555,** product, tested with determined gasket parameters*
- ✓ ***HOBT 1, HOBT 2,** with performed Hot Blow - Out Test*
- ✓ ***USP class VI,** product suitable for usage in medical devices*
- ✓ ***CITOTOXICITY,** product shows no evidence of causing cell lysis or toxicity*
- ✓ ***BAM,** sealing product proper for gaseous oxygen*
- ✓ ***DVGW,** sealing product proper for gas supply*
- ✓ ***FDA,** approval from US Food and Drugs Administration*
- ✓ ***Regulation EC 10/2011**, product suitable for Food and Drug Application*
- ✓ ***ASTM F36,** recovery and compressibility level of the product*
- ✓ ***LEAKAGE RATE,** better than 0,00001 mg/m/s*
- ✓ ***PRODUCT IS PFOA-FREE, BSE/TSE-FREE***

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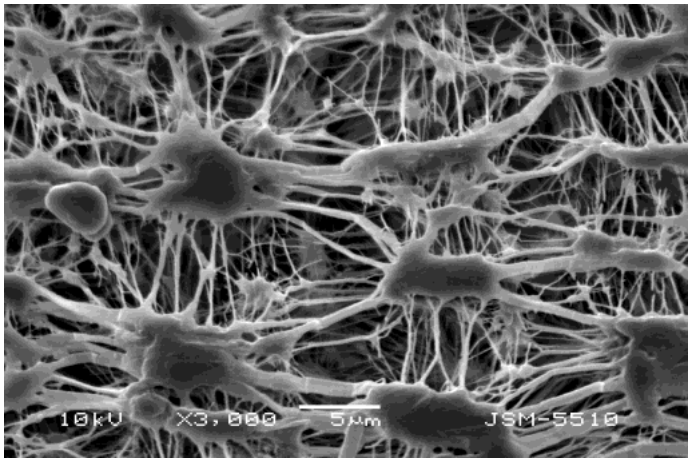
Technical Parameters



Dimensions: 1500x1500mm (±20mm); 1000x1000mm
(smaller and bigger sizes upon request)
Thickness: 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 9.0; 10.0mm
Working temperature: -240ºC / 260ºC (peak temperature +315ºC)
Compressibility: 56 / 66% ASTM F36
Recovery: 18 ÷ 22% ASTM F36
*Leakage rate: **9.2 x 10-7** mbar.l/(s.m)*
Chemical resistance: 0 ÷ 14 pH

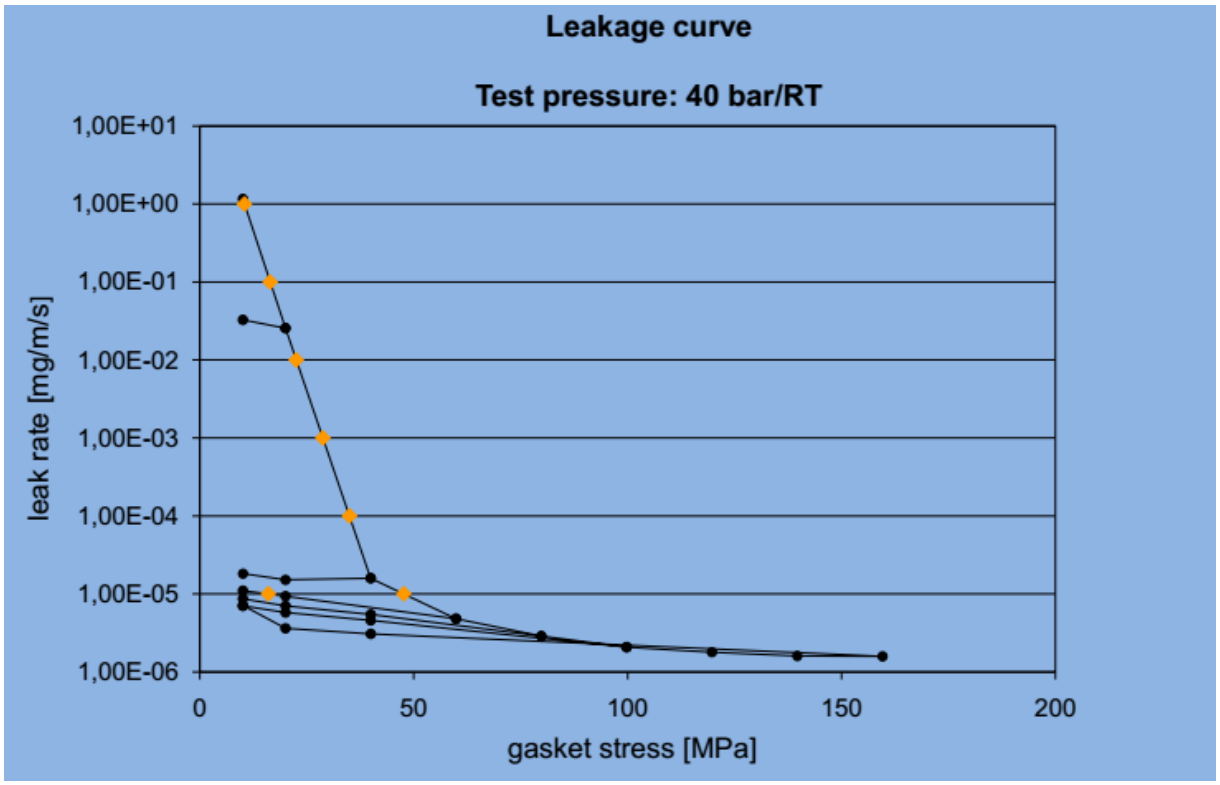


Diagram of a tightness test of a gasket 92 x 49mm cut out of 3mm ePTFE sheet, test gas pressure 40 bar. X axis - stress applied on the gasket in MPa Y axis - specific leak rate, where 1 мg/m/s corresponds to tightness level L1 Example: tightness level is L0,01 is achieved when gasket stress 22 MPA is applied.

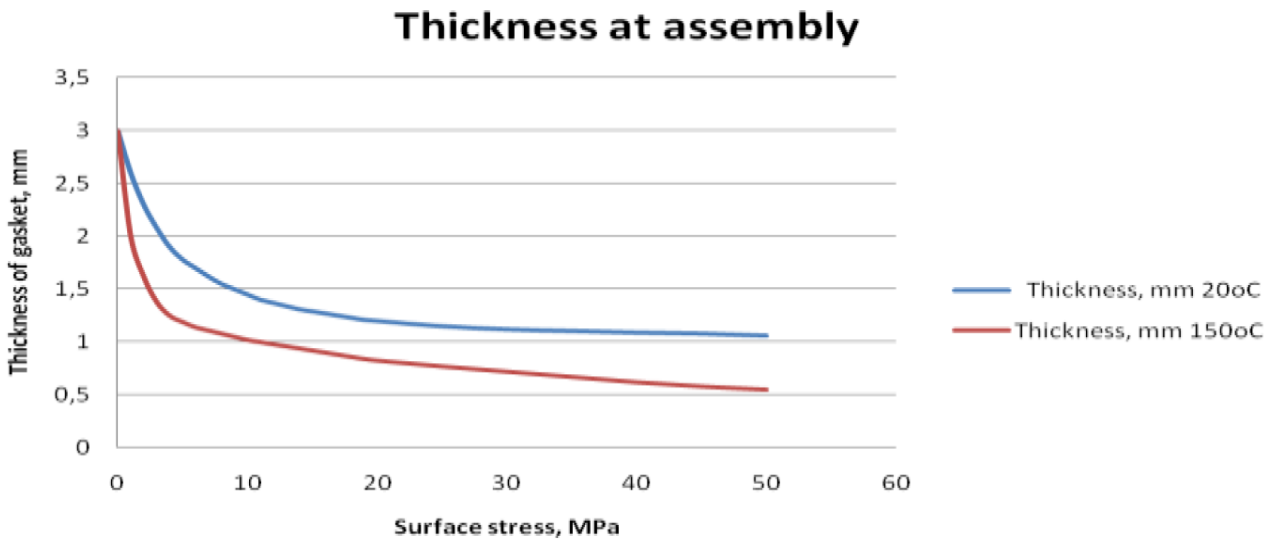
Quality Control

The whole production process is supervised in accordance with the Quality System ISO 9001, ISO 14001, OHSAS 18001. ***HUMAN HAZARDOUS****: Not registered*

Tightness Class, L	Standard	Value	Conditions
Qmin / L0,01	*EN 13555*	*18*	*He 10 bar*
QS min / L0,01	*EN 13555*	*5*	*He 10 bar*
Qmin / L0,01	*EN 13555*	*27*	*He 40 bar*
QS min / L0,01	*EN 13555*	*10*	*He 10 bar*
Qmin / L0,0001	*EN 13555*	*33*	*He 10 bar*
QS min / L0,0001	*EN 13555*	*5*	*He 10 bar*
Qmin / L0,0001	*EN 13555*	*38*	*He 40 bar*
QS min / L0,0001	*EN 13555*	*19*	*He 40 bar*

Data is related to gaskets with thickness 3mm.

"m" and "y" values (2mm, 80bar): 2.5 and 20(1)



The information listed in this DS is based on our company's trials and experience. Coestan is not to be held responsible for poor installation or application in media combining complex of factors whose total exceeds the general qualities of the product. Coestan reserves the right to change the details given without notice. Our technical and sales representatives will assist any client in need of a product with a peculiar application.