

UNIFLUOR®.

Sheets & Gaskets | ePTFE.

MULTIDIRECTIONAL ORIENTED PTFE | WS 7745

DESCRIPTION

Extruded PTFE foils are drawn multiple times in a special process and combined into a homogeneous gasket sheet for the production of UNIFLUOR® multidirectional oriented expanded PTFE sheets and gaskets. UNIFLUOR® ePTFE sheets achieve a very high strength in longitudinal and cross direction due to the multidirectional oriented fiber structure. The flow behaviour under load and temperature is significantly reduced in comparison to other PTFE gasket sheets. The soft materials adapts perfectly to uneven sealing surfaces and compensates even large gaps if the gasket thickness is chosen accordingly. UNIFLUOR® ePTFE provides sizeable, effective recovery. A sufficiently compressed in gasket once installed ensures a high tightness class even if the surface pressure is reduced during operation.

UNIFLUOR® ePTFE gasket WS 7745 HB was developed for the use in stress-sensitive flange connections and consists of: UNIFLUOR® ePTFE gasket [low density] with inner eyelet, made from sintered, almost non-porous 3M™ Dyneon™ TFM™ WS 7110 [high density]. The inner eyelet increases the diffusion resistance and reduces a possible permeation significantly. The gasket is highly pre-compacted on the outside to ensure that the occurring stresses can be reduced as much as possible in order to reduce the pre deformation forces. The sealing system is characterised by extremely low leakage rates, very low surface pressures and complies with the highest requirements in process purity.

PROPERTIES

- 100 % pure, virgin PTFE, without fillers, no colouring or stamping ink
- High longitudinal and cross strength; extremely low cold flow and a very high pressure stability
- Low setting behaviour, only minimal width increase under load
- Very good media resistance with the exception of liquid alkali metals and some flourine compounds
- PTFE is physiologically harmless for continuous operation temperatures up to 260 °C as per BG no. 21
- FDA-conform and complies with regulations in Europe and Asia for food use
- Anti-adhesive surface
- UV- and ageing resistant, no embrittlement
- Complies with TA Luft 2002 [VDI 2440/2200] leakage requirements
- Good non-stick characteristics
- Excellent [di]electric properties
- Prime elasticity

APPLICATIONS

- Non-metallic gaskets for pipeline flanges, device and container flanges, pumps and valves
- Broad range of applications primarily in the chemical and petrochemical sector
- Use in food sector and pharmaceutical production
- Suitable for the use in oxygen applications
- Sealing of stress-sensitive materials such as enamel, FRP, glass, ceramic
- Suitable as sheet material for punching and on-demand cutting [all shapes] for repairs and revisions
- For designs with inner eyelets, used for increased requirements for cleanliness and blow-out resistance [technical tightness]

PRODUCT RANGE

Technical delivery conditions as per DIN 28091

- Sheets
 - Dimensions: 1500 x 1500 mm [standard format]
 - Available thicknesses: 0.5 to 6.0 mm [9 mm upon request]
- Non-metallic gaskets
 - Dimensions:
 - for steel/stainless steel flanges as per DIN EN 12560-1 or ASME B 16.21
 - for plastic flanges FRP, sight glass, enamel etc., following the design specification, upon request
 - Non-standard sizes
 - Made from:
 - UNIFLUOR® WS 7745
 - UNIFLUOR® WS 7745 IB, gaskets with TFM™-inner eyelet [WS 7110], standard thickness 2.0 mm
 - UNIFLUOR® WS 7745 HB, gaskets with TFM™-inner eyelet [WS 7110], pre-compressed edge, standard thickness 2.0 mm






Additionally: [IDT Profile Overview | FD Series](#)

ADDITIONAL DESIGNS

- UNIFLUOR® ePTFE-sealing tape MultiTex®-FG [WS 7770]

UNIFLUOR®

ePTFE non-metallic gaskets.

Product designation	ePTFE non-metallic gasket, UNIFLUOR®	ePTFE non-metallic gasket, UNIFLUOR® with TFM™-inner eyelet and pre-comp. edge
Product name	WS 7745	WS 7745 HB
Product image		 
Profile No.	FD01 	FD11 
Features	ePTFE non-metallic gasket for use with sensitive sealing surfaces as well as stress-sensitive and marginally rigid gasket connections for which a versatile chemical resistance and suitability for food use is necessary.	Optimised ePTFE non-metallic gasket with a homogeneous inner eyelet made from TFM™ 1600 as well as a pre-compressed edge. For use in stress-sensitive gasket connections [e.g. plastic flanges] with extremely low leakage rates, very low surface pressures and highest requirements for product purity.
OPERATIONAL DATA		
Pressure	Max. 40 bar ²	Max. 40 bar ²
Temperature	-200 °C to 200 °C [for short peaks at 250 °C]	-200 °C to 200 °C [for short peaks at 250 °C]
APPROVALS		
TA Luft 2002 [VDI 2440/2200]	x	x
BAM oxygen	x	x
BAM EO/PO [Ethylene-/Propylene oxide]		
DVGW [DIN 3535-6]		
KTW-guideline		
Fire Safe Test		
FDA	x	x
EG 1935/2004	x	x
Blow-out resistance		
Germanischer Lloyd		
Features		

²Max. pressure and max. temperature should not occur at the same time