

TEFLON PTFE SHEET

Virgin PTFE Sheet · 1 m x 1 m · Chemically Inert

SKU: SWBM-013	1 M X 1 M	VIRGIN PTFE
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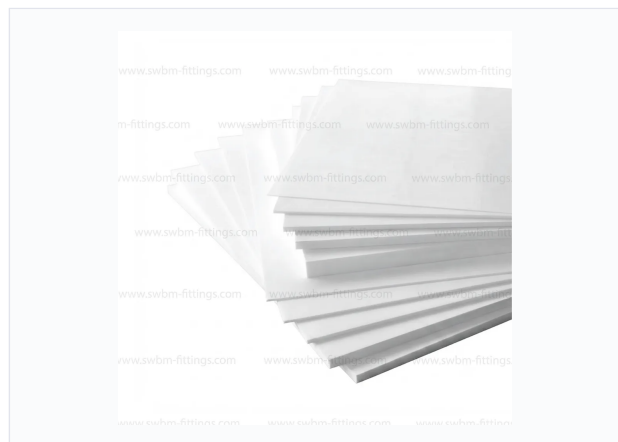


FIG. 1 | TEFLON PTFE SHEET

PRODUCT OVERVIEW

PTFE sheet is a moulded virgin polytetrafluoroethylene material used for gaskets, slide pads, liners and seals where chemical resistance matters more than anything else. PTFE is inert to almost every industrial chemical, which makes it the default choice on aggressive acid and solvent duties where rubber and fibre jointing both fail.

The sheet is white, waxy to the touch and has an extremely low coefficient of friction. It is chemically excellent but mechanically weak in one respect: PTFE creeps under sustained bolt load. Joints must be retorqued after the first thermal cycle and heavily loaded flanges should use a filled or expanded PTFE grade instead.

Product type	Virgin PTFE sheet
Polymer	Polytetrafluoroethylene
Colour	White
Sheet size	1 m x 1 m
Thickness range	1 mm to 10 mm
Chemical resistance	Almost universal

TECHNICAL SPECIFICATION

Material	Virgin PTFE, moulded	Temperature range	-200°C to +260°C
Material standard	ASTM D4894 / ISO 13000	Chemical resistance	Almost universal
Nominal density	2.20 g/cm³	Creep under sustained load	Significant, retorque required
Tensile strength	25 MPa minimum, typical	Gasket cutting	ASME B16.21 or DIN flange tables
Coefficient of friction	0.05 to 0.10, typical	Supply form	Full sheet, or gaskets cut to drawing
Filled grades	Glass, carbon or bronze filled on request	Food contact	FDA compliant grades on request

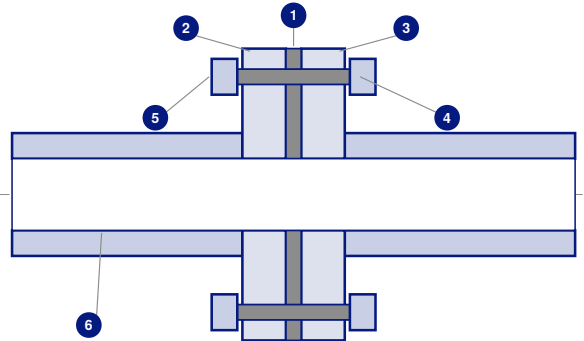
BILL OF MATERIALS


FIG. 2 | BOLTED FLANGE JOINT, SECTIONAL ARRANGEMENT

#	COMPONENT	MATERIAL
1	PTFE gasket, cut from sheet (supplied item)	Virgin PTFE
2	Flange, upstream	Carbon or stainless steel
3	Flange, downstream	Carbon or stainless steel
4	Stud bolt	ASTM A193 B7 or equivalent
5	Hex nut	ASTM A194 2H or equivalent
6	Pipe bore	Gasket bore to match, no protrusion

Item 1 only is supplied under this reference, as full sheets or as gaskets cut to your drawing. Items 2 to 6 are shown to illustrate the assembled joint and are ordered separately. Virgin PTFE creeps under sustained load, so filled or expanded PTFE should be considered for high bolt load or thermally cycled flanges.

DIMENSIONS AND WEIGHTS

THICKNESS (MM)	SHEET / ROLL SIZE	AREA (M ²)	MASS PER M ² (KG)	MASS PER SHEET / ROLL (KG)
1	1 m x 1 m	1	2.20	2.2
2	1 m x 1 m	1	4.40	4.4
3	1 m x 1 m	1	6.60	6.6
4	1 m x 1 m	1	8.80	8.8
5	1 m x 1 m	1	11.00	11.0
6	1 m x 1 m	1	13.20	13.2
8	1 m x 1 m	1	17.60	17.6
10	1 m x 1 m	1	22.00	22.0

Mass is calculated from a nominal density of 2.20 g/cm³. Mass is calculated from the nominal density of the compound and is indicative only. Actual weight varies with batch, filler loading and thickness tolerance. Thickness tolerance is typically ±10 per cent unless otherwise agreed. Sheet and roll sizes are nominal.

ORDERING INFORMATION

FIELD	OPTIONS
Product code	SWBM-013
Sheet size	1 m x 1 m
Thickness	1, 2, 3, 4, 5, 6, 8, 10 mm
Grade	Virgin PTFE. Filled grades on request
Supply form	Full sheet, or gaskets cut to drawing
Order example	SWBM-013 / 3 MM / 1 M X 1 M / VIRGIN

Stock held in Dubai for fast despatch across the UAE and GCC. Cutting to customer drawing, ring and full face gaskets to ASME B16.5 and DIN flange tables are available from our fabrication service. Contact our sales desk for pricing, availability, project quantities and certification requirements.



PRESSURE AND TEMPERATURE

Temperature range	-200°C to +260°C
Short duration peak	+300°C, indicative
Chemical resistance	Almost universal
Creep under load	Significant, retorque required
Not suitable for	Molten alkali metals, elemental fluorine

PTFE is chemically inert to almost all industrial media across the full temperature range above. The practical limit on a flange is mechanical rather than chemical: virgin PTFE creeps under sustained bolt load and relaxes, so joints must be retorqued after the first thermal cycle. Use a filled or expanded PTFE grade where bolt load is high or cycling is frequent.

TYPICAL APPLICATIONS

- Aggressive acid and solvent flange joints
- Chemical and pharmaceutical process plant
- Slide and bearing pads, low friction wear strips
- Vessel and tank lining
- Electrical and thermal insulation
- Food and pharmaceutical contact surfaces

COMPLIANCE AND QUALITY

- Virgin PTFE, inert to almost all industrial chemicals
- Very wide temperature range, -200°C to +260°C
- Extremely low coefficient of friction, suitable for slide pads
- Non ageing, non contaminating and physiologically inert
- Gaskets can be cut to ASME B16.21 or DIN flange tables
- Filled and expanded PTFE grades available on request
- Creeps under sustained bolt load, retorque the joint

INSTALLATION AND OPERATION

- Store flat and clean, PTFE picks up nothing but is easily contaminated by debris
- Cut gaskets with a sharp blade or die, the material cuts easily
- Match the gasket bore to the pipe bore, do not let material intrude into the flow
- Clean and degrease the flange faces before assembly
- Tighten bolts in a crossing pattern in at least three stages
- Retorque the joint after the first thermal cycle to compensate for creep

COMPANY

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