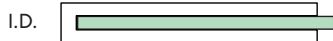
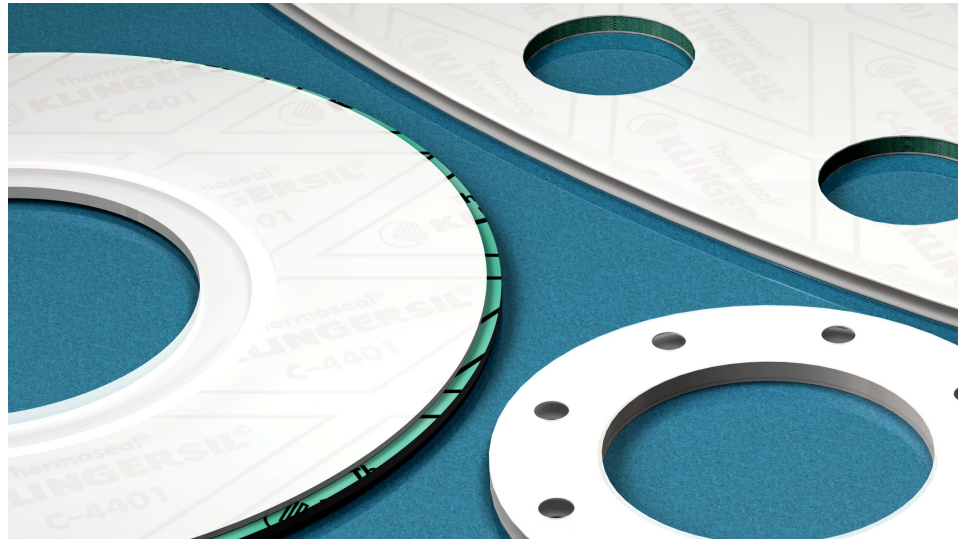


TECHNICAL BULLETIN: PTFE ENVELOPE GASKETS

IPM-TEK produces its own line of Standard Ring and Full Face Envelope Gaskets in both milled and slit styles. Made from virgin PTFE tube or rod stock, our envelope gaskets are widely used in food processing and chemical industries where contamination is unacceptable.

PTFE envelope gaskets ensure an effective seal at low bolt loads and have excellent creep resistance, high deformability, and are resistant to solvents and corrosives. A wide range of filler materials are available to ensure optimum performance in specialty applications.



IPM-TEK's Milled Envelope Gaskets have a square shoulder on the ID and allow unrestricted flow in the pipe flange. The envelope is milled from the OD to approx. 1/32" of the ID. The inner cut is machined and therefore accepts gasket filler materials with a more precise fit.



Our Slit Style Envelope Gaskets are the most popular, and are readily available in a wide range of sizes. The PTFE is split, creating two flaps of PTFE material, still connected at the ID to form an envelope for the filler gasket. Due to the way in which it is manufactured, greater clearance is necessary between the ID of the filler material and the envelope's ID, (when compared to a milled envelope gasket).

Whether you're looking for Ring, Full Face, Slit or Milled Envelope Gaskets, give IPM-TEK a call and we can find a solution for your application.

PTFE G400 (Virgin PTFE)			
Properties	Unit	Method	Typical Value
PHYSICAL - MECHANICAL			
Density	g/cm ³	ASTM D792	2.14 - 2.18
Hardness - Shore D	points	ASTM D2240	51 - 60
Tensile strength - CD	MPa	ISO 527	≥ 20
Elongation at break - CD	%	ISO 527	>200
Compressive strength at 1% deformation - CD	psi	ASTM D695	580 - 725
Deformation under load at room temperature after 24 hours at 13.7 N/mm ² - CD	%	ASTM D621	14 - 17
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Deformation under load at 260°C, after 24 hours at 41 N/mm ² - CD	%	ASTM D621	
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Impact strength Izod	J/m	ASTM D256	153
TRIBIOLOGICAL			
Dynamic coefficient of friction	/	ASTM D1894 ASTM D3702	0.06
Wear factor K	/	ASTM D3702	2.900
PV limit	N/mm ² • m/min	/	2.4 4.2 5.7
THERMAL			
Service Temperature (min - max)	°F	/	-328 / +500
Thermal expansion coefficient (linear) 25 - 100°C	10 ⁻⁵ in/in/°F	ASTM D696	6.625 - 7.206
ELECTRICAL			
Dielectric strength (specimen 0.5 mm thick)	KV/mm	ASTM D149	≥ 40
Dielectric Constant at 60 Hz and 106 Hz	/	ASTM D150	2.05 - 2.10
Volume Resistivity	Ω • cm	ASTM D257	10 ¹⁸
Surface Resistivity	Ω	ASTM D257	10 ¹⁷

CD = Cross Direction

The data we are herewith providing are all based on laboratory testing and are proposed to technical designers as possible and useful advice. Deviations from the values indicated may occur, but they do not constitute themselves either detriment of quality or reason for rejection.

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