

PTFE Gaskets

Item Code: RC1106

Property	Test Procedure	Values	Unit
Density:	ASTM D792	2.14 – 2.18	g/cm ³
Hardness (shore D):	ASTM D2240	≥ 51	°
Tensile strength - CD:	ISO 12086 / ISO 527	≥ 24	N/mm ²
Elongation break point - CD:	ISO 12086 / ISO 527	≥ 250	%
Compression strength at 1% deformation - CD:	ASTM D695	4 - 5	N/mm ²
Deformation under load at room temperature 24 hrs at 13.7 N/mm ² - CD:	ASTM D621	≤ 17	%
Permanent deformation as above after 24 hrs of rest at room temperature - CD:	ASTM D621	≤ 9	%
Deformation under load at 260°C after 24 hrs at 41 N/mm ² - CD:	ASTM D621	≤ 32	%
Permanent deformation as above after 24 hrs of rest at room temperature - CD:	ASTM D621	≤ 19	%
Impact strength Izod:	ASTM D256	153	J/m
Tribological Properties			
Dynamic coefficient of friction:	ASTM D1894 / ASTM D3702	0.06	-
Wear factor:	ASTM D3702	2.900	-
PV limit:			
at 3m/min	-	2.4	N/mm ² · m/min
at 30m/min	-	4.2	N/mm ² · m/min
at 300m/min	-	5.7	N/mm ² · m/min
Thermal Properties			
Service temperature (min - max):	-	-200 to +260	°C
Thermal expansion coefficient (linear) 25 – 100°C:	Similar to ASTM D696	12 - 13	10 ⁻⁵ (mm/mm)/ °C
Electrical Properties			
Dielectric strength (specimen 0.5mm thick):	ASTM D149	≥ 40	KV/mm
Dielectric constant at 60 Hz and 106 Hz:	ASTM D150	2.05 – 2.10	-
Volume resistivity:	ASTM D257	10 ¹⁸	Ω · cm
Surface resistivity:	ASTM D257	10 ¹⁷	Ω

Note - CD = Cross direction

Virgin PTFE Chemical Resistance

Reagent	Concentration %	Exposure Temp °C	Exposure Time	Weight Increase %
Hydrochloric Acid	10	25	12 months	NIL
		50	12 months	NIL
		70	12 months	NIL
	20	100	8h	NIL
		200	8h	NIL
Nitric Acid	10	25	12 months	NIL
		70	12 months	0.1
Sulphuric Acid	30	25	12 months	NIL
		70	12 months	NIL
		100	8h	NIL
		200	8h	0.1
Sodium Hydroxide	10	25	12 months	NIL
		70	12 months	0.1
	50	100	8h	NIL
		200	8h	NIL
Ammonium Hydroxide	10	25	12 months	NIL
		70	12 months	0.1

Virgin PTFE Common Solvent Resistance

Solvent	Exposure Temp °C	Exposure Time	Weight Increase %
Acetone	25	12 months	0.3
	50	12 months	0.4
	70	2 weeks	NIL
Benzene	78	96h	0.5
	100	8h	0.6
	200	8h	1.0
Carbon Tetrachloride	25	12 months	0.6
	50	12 months	1.6
	70	2 weeks	1.9
	100	8h	2.5
	200	8h	3.7
Ethyl Alcohol (95%)	25	12 months	NIL
	50	12 months	NIL
	70	2 weeks	NIL
	100	8h	0.1
	200	8h	0.3
Ethyl Acetate	25	12 months	0.5
	50	12 months	0.7
	70	2 weeks	0.7
Toluene	25	12 months	0.3
	50	12 months	0.6
	70	2 weeks	0.6

E: sales@therubbercompany.com W: www.therubbercompany.com

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