



BIAXIALLY ORIENTATED PTFE

PRODUCT PROFILE

SIGMA 599 is a biaxially orientated PTFE sheet containing hollow glass microspheres. It has exceptional compression characteristics making it ideal for flanges where low bolt load is available such as glass-lined or plastic flanges. Sigma 599 is also recommended for replacing cumbersome envelope gaskets. The components of 599 comply with FDA regulations. The data below represents typical values for a 1/16" sheet.

Service	Max T @ minimum thickness	500°F (260°C)
	Max P	1235 psi (8.5 MPa)
	pH Range	0 - 14

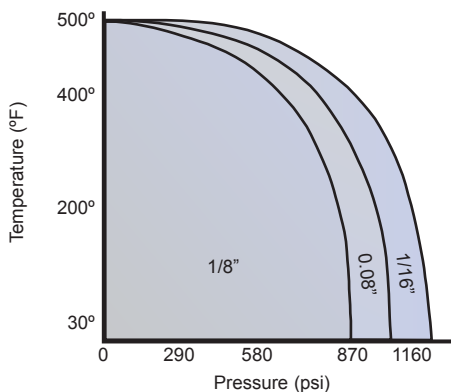
Physical Properties	Color	White Faces with Blue Core
	Density	86 lb/ft ³ (1.38 g/cc)
	Sheet Thickness	1/16" - 1/8" (150 mm - 3.20 mm)
	Sheet Size	60" x 60" (1.50 m x 1.50 m)

Mechanical Properties (ASTM F152)	Cross Grain Tensile	1810 psi (12.5 MPa)
	With Grain Tensile	1930 psi (13.3 MPa)

Sealing Properties	ASTM F36	Compressibility	38%
		Recovery	39%
	ASTM F37A	Fuel A @ 10 psi & 1000 psi Gasket Stress	0.12 mL/hr.
	ASTM F38	Creep Relaxation	30%
	BS 7531	Nitrogen Gas Permeability	0.02 mL/min.

Design Information	Gasket Constants	m	1.4
		y	1885 psi (13.00 MPa)
	Recommended Surface Finish	125 - 250 µin (3.2 - 6.3 µm)	
	ASTM Callout	F456110E11M5 †	† some digits may be chosen differently

SIGMA 599 Thickness	up to 1/16"	0.08"	1/8"
Max. Temperature	500°F	500°F	500°F
Max. Pressure (psi)	1235	1015	870



Major Manufacturing Plants

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