

PRODUCT DATASHEET

SIGMA ONE



HIGH PERFORMING BIAXIALLY ORIENTED PTFE WITH A SPECIAL PROPRIETARY FILLER. WIDEST CHEMICAL COMPATIBILITY

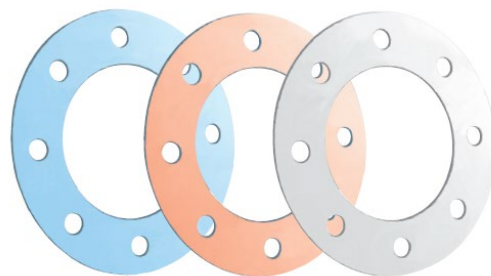
Technical Benefits:

- Wide chemical compatibility
- Biaxially oriented
- Enhanced load retention
- Inventory consolidation
- Improved rigidity
- Alleviate misapplication
- Low load to seal
- Creep and cold flow resistance
- Technician friendly

COMPARISON: SIGMA® ONE vs. Conventional-Filled PTFE

	SIGMA ONE®	BLUE	FAWN	BONE
STRONG ACIDS	●	●	●	●
STRONG BASES	●	●	●	●
COOKING LIQUORS	●	●	●	●
SULFURIC ACID	●	●	●	●
SODIUM HYDROXIDE (CAUSTIC)	●	●	●	●
OLEUM FUMING SULFURIC ACID	●	●	●	●
HYDROFLUORIC ACID	●	●	●	●

● COMPATIBLE ● CAUTION: CONSULT FLEXITALLIC ENGINEERING ● NOT COMPATIBLE



BLUE Glass Spheres
FAWN Silica
BONE Barium Sulfate



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TYPICAL TECHNICAL DATA *(for thickness 1/16")*

TEMPERATURE °F (°C)			
Min:		-418°F (-250°C)	
Max:		500°F (250°C)	
Continuous Service Max:		500°F (250°C)	
PRESSURE PSIG (BARG):			
Max:		1230 (85)	
Continuous Service Max:		725 (50)	
COMPRESSIBILITY (%)	ASTM F36	55	
RECOVERY (%)	ASTM F36	27	
CREEP RELAX (%)	ASTM F38* (measured on 1/32" per spec)	21	
INCREASE AFTER FLUID IMMERSION		Oil 3	Fuel B
Thickness (%)	ASTM F146	0	0
Weight (%)	ASTM F146	8.9	25.7
TENSILE STRENGTH, (MPa)		Across Grain	With Grain
Across Grain, (Mpa)	ASTM F152	5.7	5.5
DENSITY lb/ft ³ (g/cm ³)	ASTM F1315	79.2 (1.27)	
DESIGN FACTORS			
"m" factor	ASTM F3149-15	1.4	
"y" factor, psi (N/mm ²)	ASTM F3149-15	1740 (12)	



SEALING CHARACTERISTICS	ASTM F37B - Fuel A	ASTM F37B - Nitrogen	BS 7531 - Nitrogen
Thickness (")	1/32"	1/32"	1/16"
GASKET LOAD, psi (N/mm ²)	1000 (7)	3000 (20.7)	4640 (32)
INTERNAL PRESSURE, psig (barg)	9.8 (0.7)	30 (2)	580 (40)
LEAKAGE	0.18l/hr	0.12ml/hr	0ml/min

GENERAL INFORMATION	
COLOR	Gray
APPROPRIATE APPLICATIONS	Suitable for sealing most chemicals across the whole pH range (0-14) with the exception of molten alkali metals and fluorine gas.
ASTM LINE CALL OUT	F458000B4M3

AVAILABILITY	
SHEET DIMENSIONS	60" x 60"
THICKNESS RANGE	1/32", 1/16", 1/8". Other thicknesses available on request
TOLERANCES	Length and width: +1%. Thickness: -10%, +5%

This data sheet refers to the material as supplied. The information contained herein is given in good faith, but no liability will be accepted by the Company in relation to same.

We reserve the right to change the details given on this data sheet as additional information is acquired. Customers requiring the latest version of this data sheet should contact our Applications Engineering Department.

The information given and, in particular, any parameters, should be used for guidance purposes only. The company does not give any warranty that the product will be suitable for the use intended by the customer.