



SICHEM® S59 is a **multidirectionally modified PTFE gasket sheet** filled with **mica**, a mineral-based filler known for its **high heat resistance, excellent dielectric strength, and outstanding chemical stability**. The **bi-oriented molecular structure** and the **mica-based filler** provide the material with excellent mechanical performance, superior resistance to hot creep, and optimal **thermal and dimensional stability**, even under prolonged loads.

High chemical and high-temperature resistance: mica is resistant to many chemical agents, making it suitable for operation in **corrosive environments**, including exposure to **solvents and oxidizing agents**. PTFE is not compatible with: bromine trifluoride, chlorine trifluoride, fluorine dioxide, hydrogen fluoride, molten alkali metals, elemental lithium, elemental potassium, and elemental sodium. For compatibility with the filler materials used in the Sichem range, please refer to the **Chemical Compatibility List**.

Superior mechanical stability: the biaxial orientation improves resistance to creep and permanent deformation.

Excellent machinability: easy to punch or CNC cut, ensuring precision even for complex geometries.

Low permeability coefficient: ideal for applications requiring long-term tight sealing.

Operating temperature: from **-200°C to +260°C**, depending on the type of fluid and the applied load.

Bidirectional PTFE	Sichem S59
Composition	Modified PTFE with Mica filler
Density ASTM F 1315	2.1 g/cm ³
Minimum operating temperature	-260 °C
Maximum operating temperature	+260 °C
Max operating pressure	80 bar
P x T Max. (Thk 0.8 - 2.0 mm)	12000 Bar x °C
P x T Max. (Thk 3.0 mm)	8500 Bar x °C
Leakage DIN 3535-6	<0.005 mg*s-1*m-1
Creep relaxation DIN 3535-6	<42 %
Compressibility DIN 3535-6	>4.8 %
Recovery DIN 3535-6	>3.2 %
Minimum PH	0
Maximum PH	14
Available sheets size	1.500x1.500 mm 1.750x1.750 mm
Available thickness	0.75 ÷ 6.00 mm
Sheet size tolerance	50 mm
Thickness tolerance	10 %



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