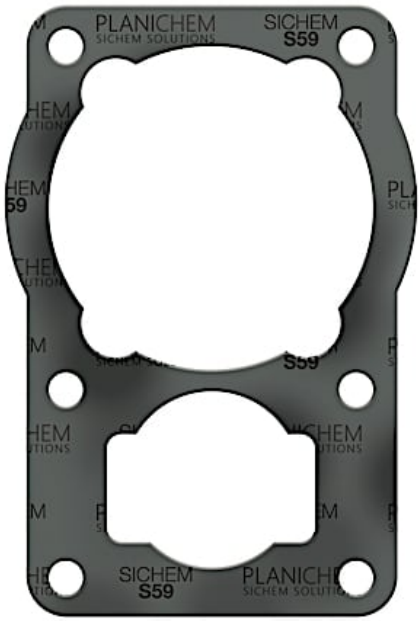
PLANICHEM
SICHEM SOLUTIONS

# SICHEM S59




**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 ASTMF 1315** | 2.1 g/cm³ |
| **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 |
| **Available thickness** | 0.75 ÷ 6.00 mm |
| **Sheet size tolerance** | 50 mm |
| **Thickness tolerance** | 10 % |

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