



## **18MS.004**

### **Graphite gasket**

#### **Overview**

Expert in industrial sealing solutions, Final Advanced Materials offers tailored thermal insulation and sealing solutions made with graphite gaskets.

Graphite gaskets are high performance products reinforced with stainless-steel sheets with spikes or hooks, smooth inserts or expanded metal. The graphite papers used in our gaskets were specifically designed for very high-temperature applications, up to more than 550 °C.

Final Advanced Materials has the expertise to propose the assembly of tailored gaskets, from single units to series production, from its own workshop. These gaskets can be cut to any shapes according to your specifications to satisfy your technical constraints.

#### **Selection criteria**

The choice of gasket depends on many factors that need to be taken into account:

- Pressure
- Chemical environment
- Temperature
- Process control
- Bolts
- Flanges
- Fluids

#### **Applications**

- Sealing with hot gases
- Heat exchanger
- Burner gaskets
- Exhaust manifold
- Thermal insulation

## Range

Final Advanced Materials offers different references of graphite gaskets to cover all industrial applications.

### Eyrgraf Multi-HP-AS

Multi-HP-AS graphite sealing gaskets are made of several layers of pure graphite (99.85 %) reinforced with thin stainless-steel 316 sheets with spikes. This binding system free of bonding agent combined with the high quality of the graphite gives the gasket an exceptional resistance to high temperatures, up to more than 600 °C. These gaskets can withstand very high tightening constraints and are suitable for every process, including at high temperatures (steam, overheated water, thermal fluids) and unfavourable chemical conditions (pH 0 to 14).

### Klinger Graphite HL

This unreinforced expanded pure graphite (98 %) gasket is intended for flanges with low tightening. Its cutting process is very simple. It is also used as a coating for semi-metallic gaskets (striated, flat, metal-plastic).

### Klinger Graphite Multi-AS

The multi-AS gasket is made of several layers of laminated expanded graphite and smooth stainless-steel inserts. Its high mechanical strength allows it to replace semi-metallic gaskets in some cases (spiral wound, grooved with layers). In addition to being easy to cut, it is suitable for applications involving steam, overheated water and thermal fluids, up to +550 °C, and receives an anti-adherent treatment on both sides.

### Klinger Graphite SLS-AS

A high-quality expanded graphite gasket reinforced with a smooth stainless-steel plate, ideal for applications combining high temperatures and pressures. It stands out for its versatility against steam, overheated water and thermal fluids, up to 550 °C. Easy to cut and to install, it has an anti-adherent treatment to simplify the disassembly.

**Comparative table**

Four versions are available to suit your needs.

Material	Resistance to high temperatures	Tightness	Compressibility
HL	★★★★☆	★★★★★	★★★★☆
SLS-AS	★★★★☆	★★★★★	★★★★☆
Multi HP AS	★★★★★	★★★★☆	★★★★☆
Multi AS	★★★★☆	★★★★☆	★★★★★

## Technical Data

Property	Unit	Eyrgraf Multi-HP-AS	Klinger® Graphite HL	Klinger® Graphite Multi-As	Klinger® Graphite SLS-AS
<b>Colour</b>		Black	Anthracite	Anthracite	Anthracite
<b>Density</b>	g/cm <sup>3</sup>	1 (excluding metallic insert)	1	1 (excluding metallic insert)	1 (excluding metallic insert)
<b>Compressibility</b>	%	41	40 to 50	30 to 45	40 to 45
<b>Elastic recovery</b>	%	13	10 to 15	10 to 25	10 to 15
<b>Stress relaxation</b>	MPa	46	NC*	NC	NC
<b>Relaxation 50 MPa, 16h/300 °C</b>	MPa	NC	> 46	≥ 45	> 46
<b>Gas impermeability</b>	Mg/(s x m)	NC	< 0.06	≤ 0.1	< 0.06
<b>Maintenance factor "m"</b>		2.5	NC	NC	NC
<b>Seating stress "y"</b>	MPa	20	NC	NC	NC
<b>Standard formats**</b>	mm	1,000 x 1,000 / 1,000 x 2,000	1,000 x 1,000 / 1,000 x 2,000	1,000 x 1,000 / 1,000 x 2,000 / 1,500 x 1,500	1,000 x 1,000 / 1,000 x 2,000 / 1,500 x 1,500
<b>Standard thickness**</b>	mm	1 / 1.5 / 2 / 3 / 4	0.5 / 1 / 1.5 / 2 / 3	1.5 / 2 / 3	1 / 1.5 / 2 / 3

\*Not communicated

\*\*Other formats and thicknesses available on request

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