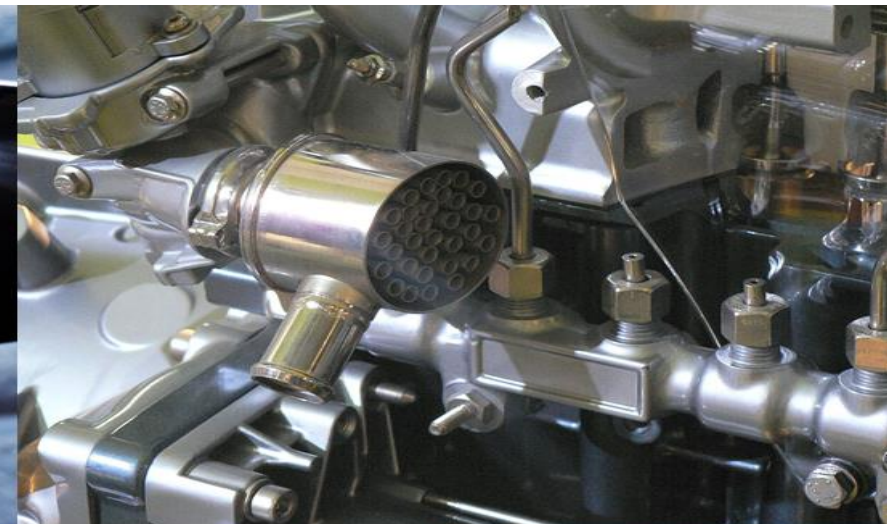


AG Egliswil

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KLINGER®



KLINGER

LEADING IN STATIC SEALING SOLUTIONS

We are the industries preferred partner for the production and development of high quality soft sealing materials.

We offer a wide range of CNAF, PTFE, Graphite, Mica and Rubber coated steel materials for sealing applications.

We strive to lead the industry in terms of Total Cost of Ownership.

Our technical support combines unsurpassed material know-how with world class application expertise.

The KLINGER global network makes sure that our materials and services are available to you locally no matter where you are.

KLINGER® Milam

Mica gaskets are used in the automotive sector, gas turbines, gas and oil burners, heat exchangers and in other flange connections. Mica gaskets are made from a material which consists of phlogopite mica paper with a silicone binder.



KLINGER Milam PSS is a high temperature resistant material inert to most chemicals and with good seal ability for gases @ low pressure. KLINGER Milam PSS is reinforced with a stainless-steel tanged insert. Its properties make it popular for use as exhaust manifolds, turbines, turbochargers and burner ductings.



KLINGER Milam H/HL is composed of pure mica and high temperature binder layers. It is intended for the manufacture of seals resistant to extremely high temperatures. It is mainly used in applications in contact with hot and dry gases.

SERVICE

Perfect extension of KLINGER quality standards:

- Quality control and R&D labs
- Digital support
- Certifications

We are committed to meeting and exceeding the expectations of our customers.

We supply a gratifying experience with service and leading products. Our materials are in service in critical applications under harsh conditions. They withstand extreme temperatures and temperature cycles, high pressures and aggressive media – for years.

ABOUT US

KLINGER Egliswil
Your Expert for High-Temperature Gasket Laminates.

KLINGER AG Egliswil, was established in 1980 as competence center for high temperature gasket materials made of flexible graphite and mica, as well as for rubber coated steel.

Our Milam material has been designed to master the rigors of high-temperature sealing applications.

KLINGER Milam is the preferred choice for utilization scenarios such as exhaust pipes, turbines, turbochargers and fuel lines - it can withstand temperatures of up to 900 °C in continuous operation.

KLINGER Milam is:

- Ideal for temperatures up to 900°C and higher
- Recommended for exhaust systems
- Extremely high oxidation resistance

KLINGER Milam is an asbestos-free sealing material on a basis with perforated 0.1 mm thick stainless steel reinforcement made of 1.4401 or AISI 316. The particular property of this material is the outstanding thermal stability. The weight loss at 800°C is less than 5%. In combination with excellent chemical resistance to solvents, aggressive acids, alkalis and mineral oils it offers interesting application possibilities.

APPROVALS

KLINGER products deliver proven user safety.

Our products are amongst the most approved and certified products within the industry such as German Lloyd for the Milam products..

We deliver certified and trusted products worldwide and KLINGER AG is

- EN ISO 9001, ISO 14001 certified
- Environmental management system acc. the SWISO regulation

PRODUCTS/INDUSTRY

At KLINGER we focus on ensuring plant safety. No matter whether the medium to be transported is fluid or gaseous, we see it as our responsibility to ensure that media remain where they are intended.

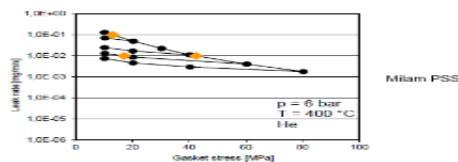
Fully committed to this approach, our gaskets ensure reliable and safe operation – without leakages and subsequent harm or material damage.



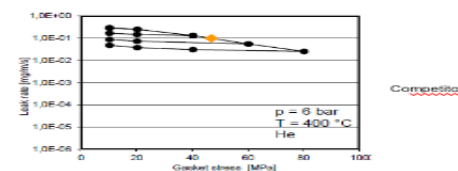
BENEFITS

Comparison between competitive high-temperature gasket material and Klinger Milam PSS – 3mm.

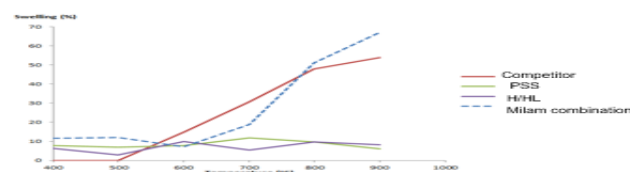
Leakage behavior in high temperature range:
At 400°C, the KLINGER Milam PSS achieves with a surface pressure of approx. 15 MPa the leakage class L 0.1. Competitor in comparison at approx. 45 MPa. With higher surface pressure of approx. 40 MPa, KLINGER Milam PSS achieves the leakage class L 0.01 and is one class higher compared with competitor.



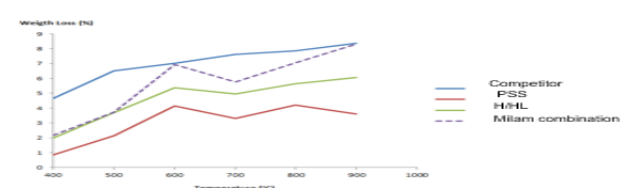
Leakage behavior in low temperature range:
At ambient temperature, Competitor reaches the leakage class L 1.0 with approx. 20 MPa surface pressure, KLINGER Milam PSS at 56 MPa. Also at ambient temperature Competitor reaches higher levels of tightness with increasing surface pressure.



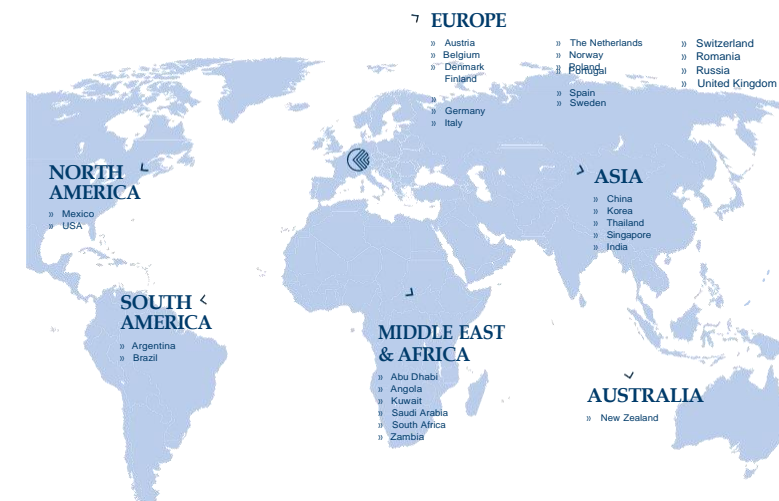
Swelling versus temperature
 > Swelling level for PSS and H/HL is lower than for the competitor gasket.
 > Swelling level with a mix of mica is higher, by keeping a very good adhesion of the product



Weight loss with temperature
 > Weight loss level is lower for the PSS and H/HL than for the competitor gaskets
 > With the mix of mica, the weight loss reach the same level than the competition at 900°C



Conclusion
 > Milam offers definitively better resistance at high temperatures (> 600 °C) and a much better cohesion for temperatures above the 700 °C.



ONE GLOBAL NETWORK FOR TRUSTED PRODUCTS AND SERVICES