KLINGER

Sealex

PRODUCT DATA SHEET

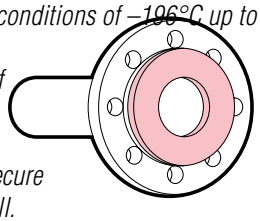
Quick & easy to assemble –

Sealing on a roll

(AGA Certified to AS4623:2008 Class III),Pressure 2 MPa

(FDA Conformity)

Be prepared for every eventuality with KLINGERsealex – "safe sealing on a roll". Under service conditions of –196°C up to +260°C and pressure of up to 150 bar KLINGER-sealex offers secure sealing on a roll.



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THE SEAL SPECIALISTS

What's so unique about KLINGERsealex?

KLINGERsealex is a PTFE product manufactured from a unique, physically networked fibrillated material. It is composed of specially prepared fluorocarbons with exellent resistance to aggressive chemicals as well as offering secure sealing under high pressures - even permitting the use of the material in applications up to 150 bar internal pressure ratings.

KLINGERsealex can be applied to any sealing face, giving excellent sealing performance even at low bolt loads.

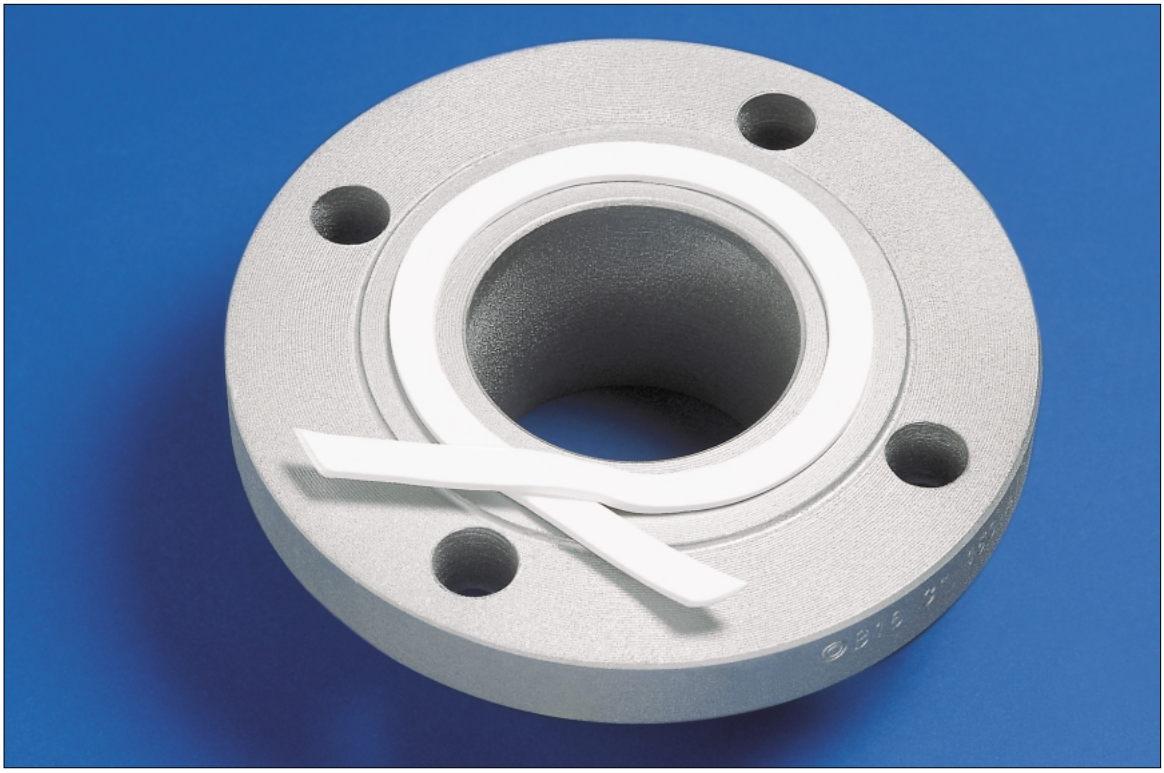
The benefits to repair and maintenance routines

You are prepared for every eventuality with KLINGERsealex – the seal an a roll. Maintenance Engineers have already benefited from the versatility of KLINGERsealex, since it can be used practically anywhere.

When replacing defective seals, first clean the flange as thoroughly as possible. Since one of the strengths of the product is its ability to compensate for non-ideal flange conditions, a small amount of residue material on the flange face is permissible.

Next apply the strips of sealant straight from the roll onto the flange surface as shown on the attached photographs. Apply the tape either overlapping at the ends or cut acutely and abutted.

That`s all there is to it!



Replacement of conventional gasket materials

KLINGERsealex offers particular advantages in applications that prove difficult for conventional materials:

- *When the sealing surface or the stability of the flange prevents the successful use of a conventional seal.*
- *When the geometry of the flange seating demands an intricate gasket shape, which is both difficult to assemble and uneconomical to manufacture.*
- *When the flange material will only permit the use of low bolt loads to seat the gasket while the media in the system and the associated interior pressure demands a high integrity seal.*

These are just some of the areas in which you can use KLINGERsealex. You may have other ideas for its use, either as a replacement for conventional gasketing or as a hidden reserve for unforeseen circumstances.

Nothing is left to chance with KLINGERsealex.

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KLINGERsealex: The universal sealing solution

AGA Certified to AS4623-2008 Class III ,Pressure 2MPa & FDA Comformity

If need be, you can use two strips of tape bonded over one another.

When re-assembling the flange, you can work with the usual assembly torque – then fit and forget. There is no need to re-tighten the bolts with KLINGERsealex.

However, if it is possible to re-tighten the flange assembly after 24 hours, then you can reduce the applied bolt load by half.

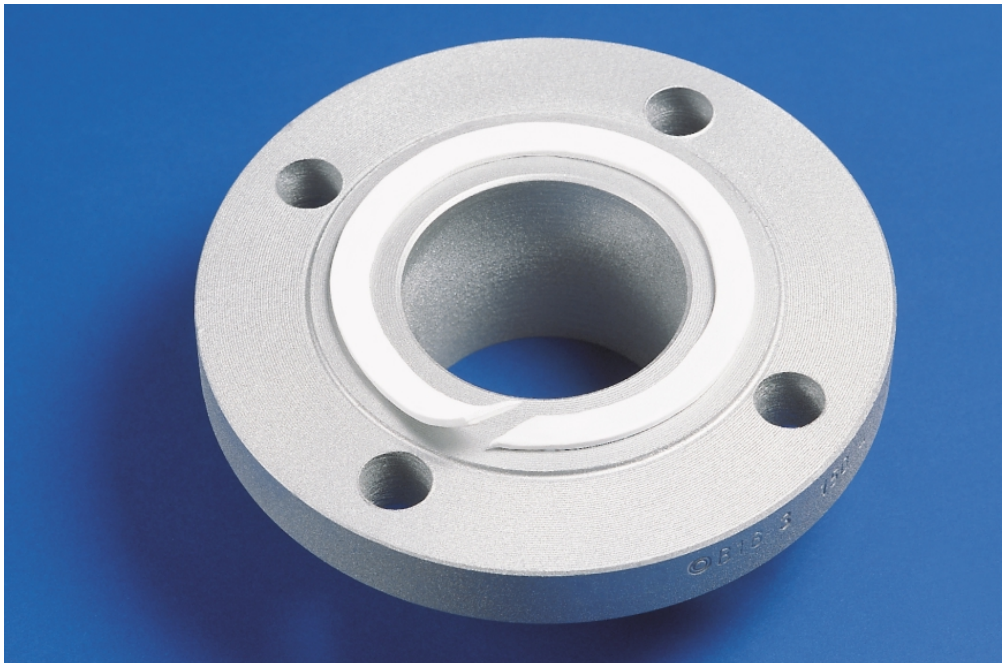
Despite its versatility and ease of handling. KLINGERsealex should not be viewed as a temporar y solution, but as a high grade permanent seal with unique characteristics.

Important approval certifications and tests:

***"DVGW** – Forschungsstelle Deutscher Vereine des Gas- und Wasserfaches" (Research and Development Centre for German Gas and Water Utilities) – new tests in preparation.*

***"BAM** – Bundesanstalt für Material-prüfung" (German Federal Government Agency for Materials' Testing). Tested for oxygen at 60 bar and 125 °C. Also suitable for liquid oxygen.*

***TÜV** – approved ("TÜV – Technischer Überwachungsverein" – Geman Federal Mechanical Testing Authority): Certification No. 3/4872.*



As you can see, with just a few rolls of KLINGERsealex you have the same level of security as with conventional gaskets.

Furthermore, you have the secutity knowing that you are equipped for all eventualities.

Width mm	*Thickness ca. mm*	*Roll length/m*	*Flange DN*
3.2	*1.5*	*30*	*up to 50*
4.7	*2.0*	*20*	*up to 200*
6.5	*2.5*	*15*	*up to 600*
9.5	*3.0*	*8*	*up to 1,500*
12.7	*6.5*	*5*	*from 1,500*
16	*6.5*	*5*	*from 1,500*
19	*7.0*	*5*	*from 1,500*
25.4	*8.0*	*5*	*from 1,500*

Should you have queries concerning the suitability of KLINGERsealex for your application, we will gladly assist you with our experience. You may contact us through our representatives. Let them have the details of your particular application requirements.

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The following applications of KLINGERsealex will give you some idea of the innovative uses of this product. Further references are available on request.

KLINGERsealex in turbine construction

Operating conditions:
8 bar at 240 °C.
A sealing material was required for a number of flanges in the low-pressure area of the turbine house of a nuclear power station.
KLINGERsealex succeeded in replacing the traditional seals and reduced the time needed to clean the flange faces giving savings of some 40-workforce hours every time the joints were replaced. These savings are in addition to the savings made in dismantling and assembling the joint and in the cost of materials, which would otherwise have been used.

KLINGERsealex in dryer kilns

Operating conditions: 230 °C. Tunnel kilns for the kiln drying of coated/ lacquered steel and aluminium metal elements on the air flow feed and air extraction sides are sealed with the new "miracle of the roll". KLINGERsealex replaces woven tape fabric, flocked side panel cladding and other insulation materials with or without asbestos.

KLINGERsealex adjusts extremely well to all flange sealing conditions and possess outstanding resistance to paint solvents and cleaning agents.

KLINGERsealex as a temporary solution in pipeline systems

Operating conditions:
Aggressive agents at 5 bar and 32 °C. An extremely aggressive mixture of distilled water, vulcanisation agents, carrier agents and pigments is conveyed via a pumping station and associated piping system. KLINGERsealex is also employed here for repairs in emergencies. The results are surprising. An emergency solution becomes a permanent fixture.

Installation instructions

Clean flanges, cut off a lenght of KLINGERsealex slightly longer than the actual circumference of the seal. Peel off the adhesive protection strip and press KLINGERsealex into position. Cross the free ends of KLINGERsealex adjacent to a bolt hole and bolt up the mating surfaces using the recommended clamping force and bolt tightening patters.

Sealex	Minimum/Maximum clamping force to effect seal at ambient*		Minimum/Maximum clamping force to effect seal at 100 °C*	
Width/ mm	Liquid N/mm	Gas N/mm	Liquid N/mm	Gas N/mm
3	85 – 400	170 – 400	150 – 400	350 – 400
5	125 – 500	250 – 500	215 – 500	400 – 500
7	170 – 750	340 – 750	300 – 750	550 – 750
10	220 – 950	435 – 950	375 – 950	650 – 950
14	280 – 1000	560 – 1000	490 – 1000	750 – 1000
17	300 – 1200	600 – 1200	525 – 1200	825 – 1200
20	395 – 1450	785 – 1450	685 – 1450	900 – 1450
25	510 – 1600	1000 – 1600	900 – 1600	1200 – 1600
* Guideline for clamping force per mm of lenght				

Certified according to DIN EN ISO 9001.

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8991045 : Nov'12

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