DNV·GL

Certificate No:
TAP00001S7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gaskets and Sealings

with type designation(s)
Flat Gasket - KLINGER®PSS130, KLINGER®PSS150, KLINGER®PSS200, KLINGER®PSS300

Issued to
Klinger AG Egliswil
Egliswil, AG, Switzerland

is found to comply with
DIN 52913
DIN 52910
ASTM F152
ASTM F36

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL
Temperature range: see manufacturer's instructions
Max. working press.: see manufacturer's instructions
Design:
Sizes:

Issued at **Hamburg** on **2019-05-06**
This Certificate is valid until **2024-05-05**.
DNV GL local station: **Augsburg**

Approval Engineer: **Guido Friederich**

for **DNV GL**

Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-030278-1**
Certificate No: **TAP00001S7**

PRODUCT DESCRIPTION

KLINGERmilam®PSS

Asbestos free flat gasket material. Material composition based on a phlogopite mica fiber-free lamellar structure with a perforated stainless steel reinforcement of 0,1 mm.

Stainless steel material types: EN 1.4401 / AISI 316

Dimensions:

Sizes: 1200 x 1000 mm
Tolerances: Thickness acc. DIN 28091-1
Length ± 5 mm, width ± 5 mm

Technical data for KLINGERmilam®PSS gaskets :

Technical data	Standard	PSS130	PSS150	PSS200	PSS300	Unit
Compressibility	ASTM F36A	12-20	12-20	15-23	18-26	%
Recovery	ASTM F36A	30-45	35-45	32-42	28-38	%
Ignition loss	DIN 52911	≤ 5	≤ 5	≤ 5	≤ 15	%
Stress relaxion	DIN 52913	≥ 33	≥ 33	≥ 33	≥ 30	MPa
Stress relaxion	BS 7531	≥ 28	≥ 28	≥ 28	≥ 20	MPa
Tang insert material/thickness		AISI 316 / 0,10				mm
Continuous Service temperature		max. 900 °C	max. 900°C	max. 900°C	max. 900°C	°C
Gas leakage He @ [test conditions]		≤ 0,10 [30/6]	≤ 0,10 [30/6]	≤ 0,15 [30/6]	≤ 1,50 [30/6]	mg/s*m^{-1} MPa/bar
Stress		≤ 100	≤ 90	≤ 80	≤ 80	MPa
Thickness		1.3	1.5	2.0	3.2	mm

APPLICATION

The above listed gasket material sheet type may be used under consideration of the mechanical and technical characteristics as well as physical and chemical properties for the following applications:

> On board ships and other structures classed by DNV GL as follows:
> Ship's piping systems, pressurized items and machinery containing e.g. the following fluids: non flammable gases, oil, fuel oil, water.

The selection of the gaskets for the corresponding application and appropriate installation has to be in accordance with the instructions of the manufacturer.

LIMITATION / EXCLUSIONS

- Pipe lines for LNG and flammable gas systems and cryogenic fluids.
- Cargo lines on chemical and gas tankers carrying flammable and/or noxious media, propylene oxide and mixtures of ethylene and propylene oxide.

TYPE APPROVAL DOCUMENTATION

MARKING OF PRODUCT

For traceability of products, marking shall be legible and indelible.

The flat gasket shall be clearly marked with the following minimum signs:

- Manufacturer's name / label
- Product type

PERIODICAL ASSESSMENT

A condition for retention of the type approval certificate in its validity period is that periodical assessments are successfully carried out. The objective of the periodical assessment is to verify that the conditions for the type approval have not been altered. Regulations for the periodical assessment of the type approval certificate are to be find in the DNVGL Class Programme CP-0338.

It is further to be noted that the Society shall be informed of any:

- Modifications to the product which are liable to affect its characteristics and functions, as originally specified and tested;
- Shifting of the production site and additional production site.

If such notifications are not made, the validity of the type approval certificate terminates.

END OF CERTIFICATE