Approval Certificate

This is to certify, that the undernoted products have been approved in accordance with the relevant requirements of the GL Approval System.

Certificate No.	**47 704 - 03 HH**
Company	**Rich. Klinger Dichtungstechnik GmbH & Co. KG** **Am Kanal 8 - 10** **2352 Gumpoldskirchen, AUSTRIA**
Product	**FLAT GASKETS - ASBESTOS FREE**
Type	**KLINGERSIL C-4408 / C-4500 / 4509 / 4530**

Technical Data / Application

TECHNICAL DATA

Type	KLINGERSIL C-4408
Density	1.9 [g/cm³]
Compressibility	8% { ASTM F 36 J }
Recovery	=/> 50% { ASTM F 36 J }
Tightness	2.5 [ml/min] { DIN 3535-6 }
Soluble chloride content	150 [ppm]
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 10% thickness decrease at 300 [°C]: 22%

RANGE OF APPLICATION

The gaskets may be used under consideration of the mechanical and physical properties as well as the chemical resistance as follows:

- Ship`s piping systems excluding cargo lines on Chemical and Gas Tankers carrying propylene oxide and mixtures of ethylene / propylen oxide.
- Maximum allowable working pressure and temperature according to the specification of the manufacturer.

Approval Standard	• ASTM and DIN
Documents	• Test Reports • Technical Data • Audit Report
Remarks	• TECHNICAL DATA, PRODUCTION PLACES and REMARKS / LIMITATIONS see page 2.
Valid until	2018-11-20
File No.	XI.B.03

Germanischer Lloyd

Hamburg, 2014-01-08

i.V.

Olaf Drews

i. A. P. Gierhan

Peter Gierhan

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TECHNICAL DATA

Type	KLINGERSIL C-4500
Density	1.4 [g/cm³]
Compressibility	12% { ASTM F 36 J }
Recovery	=/> 60% { ASTM F 36 J }
Tightness	< 1.0 [ml/min] { DIN 3535-6 }
Soluble chloride content	150 [ppm]
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 10% thickness decrease at 300 [°C]: 15%

Type	KLINGERSIL C-4509
Density	2.0 [g/cm³]
Compressibility	12% { ASTM F 36 J }
Recovery	=/> 70% { ASTM F 36 J }
Soluble chloride content	150 [ppm]
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 9% thickness decrease at 300 [°C]: 7%

Type	KLINGERSIL C-4530
Density	1.55 [g/cm³]
Compressibility	10% { ASTM F 36 J }
Recovery	=/> 55% { ASTM F 36 J }
Tightness	< 0.1 [mg/sm] { DIN 28090-2 }
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 10% thickness decrease at 300 [°C]: 15%

PRODUCTION PLACES

Rich. Klinger Dichtungstechnik GmbH & Co. KG
Am Kanal 8-10
2352 Gumpoldskirchen
AUSTRIA

REMARKS / LIMITATIONS

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

Germanischer Lloyd

Hamburg, 2014-01-08

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Olaf Drews

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