



Type Approval Certificate

Germanischer Lloyd

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 47 704 - 03 HH

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

Product Description FLAT GASKETS

Type KLINGERSIL C-4500 / 4509 / 4530

Environmental Category None

Technical Data / TECHNICAL DATA

Range of Application	Type	KLINGERSIL C-4500
	Density	1.4 [g/cm ³]
	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	thicknees decrease at 23 [°C]: 10% thicknees decrease at 300 [°C]: 15%

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.

Test Standard • ASTM and DIN

Documents • Test Reports
• Technical Data
• Audit Report

Remarks None

Valid until 2008-11-20

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File No. II.C.09

Hamburg, 2003-11-21

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TECHNICAL DATA

Type	KLINGERSIL C-4509
Density	2.0 [g/cm ³]
Compressibility	12% { ASTM F 36 J }
Recovery	=/ > 70% { ASTM F 36 J }
Soluble chloride content	150 [ppm]
Klinger cold / hot compression, 50 MPa	thicknees decrease at 23 [°C]: 9% thicknees decrease at 300 [°C]: 7%

Type	KLINGERSIL C-4530
Density	1.55 [g/cm ³]
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	thicknees decrease at 23 [°C]: 10% thicknees decrease at 300 [°C]: 15%

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

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This certificate is issued on the basis of "Regulations for the Performance of Type Tests, Part 0, Procedure".