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.	**47 710 - 03 HH**
Company	**Rich. Klinger Dichtungstechnik GmbH & Co. KG** **Am Kanal 8 - 10** **2352 Gumpoldskirchen, AUSTRIA**
Product	**FLAT GASKETS**
Type	**KLINGERtop-graph-2000** **KLINGERtop-graph-2009**

Technical Data / Application

TECHNICAL DATA (continued)

Type	KLINGERtop-graph-2000
Density	1.75 [g/cm³]
Compressibility	10% { ASTM F 36 J }
Recovery	=/> 60% { ASTM F 36 J }
Tightness	0.5 [ml/min] { DIN 3535-6 }
Soluble chloride content	<50 [ppm]
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 10% thickness decrease at 300 [°C]: 10%

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

Olaf Drews

i. A. P. Gierhan

Peter Gierhan

Approval Certificate

Certificate No. **47 710 - 03 HH**

TECHNICAL DATA

Type	KLINGERtop-graph-2009
Density	2.25 [g/cm³]
Compressibility	9% { ASTM F 36 J }
Recovery	=/> 60% { ASTM F 36 J }
Tightness	0.1 [mg/sm]
Soluble chloride content	150 [ppm]
Klinger cold / hot compression, 50 MPa	thickness decrease at 23 [°C]: 10% thickness decrease at 300 [°C]: 10%

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

i.V.

Olaf Drews

i. A. P. Gierhan

Peter Gierhan