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Ref.: C-119700-04-St/st
Contact Person: Mrs. Stefanski

TEST CERTIFICATE
according to the KTW-Recommendations
(Bundesgesundheitsblatt Vol. 20, page 124 ff., 1977)

- English version (Ref.: C-116434-04-St/st dated 16.04.2004) -

Applicant:

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

A-2352 Gumpoldskirchen
ÖSTERREICH

Product:

KLINGERSIL® C-4400 (cyan)

Kind of test:

☒ Producttest / Permissiontest

☐ Supervisiontest

The test plates **KLINGERSIL® C-4400** (cyan) meets the requirements of the KTW-Recommendations according to the test report (Ref.: C-119700-04-St/st dated 04.08.2004) for the following applications and temperatures:

Applications:

Temperatures:

	cold water (23°C)	moderately hot water (60°C)	extremely hot water (90°C)
A Pipes	---	---	---
B Reservoirs / Containers	---	---	---
C Ancillaries / Fittings	---	---	---
D1 large gaskets	passed	---	---
D2 small gaskets	passed	---	---

as far as the material is qualified technically.

This test certificate ending by **16.04.2009**, as far as there are no changes in the formula. After this time it can be extended for further 5 years if demanded.

Gelsenkirchen, 04.08.2004



The Director of the Institute
on behalf of

(Priv.-Doz. Dr. Tuschewitzki)

Durch die DAP Deutsches Akkreditierungssystem
GmbH akkreditiertes Prüflaboratorium
Die Akkreditierung gilt für die in der Urkunde
aufgeführten Prüfverfahren.

Deutscher Akkreditierungsrat
DAR
DAP-PL-2548.00

The test certificate shall not be reproduced except in full, without written approval of the Institute.

The test results refers to the specimen. This test certificate is no DVGW-Certification.

Träger des Hygiene-Instituts:
Verein zur Bekämpfung der Volkskrankheiten
im Ruhrkohlengebiet e.V., Gelsenkirchen



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Ref.: C-119700-04-Sf/st
Contact Person: Mrs. Stefanski

TEST REPORT
according to the KTW-Recommendations
(Bundesgesundheitsblatt Vol. 20, page 124 ff., 1977)

- English version (Ref.: C-116434-04-Sf/st dated 16.04.2004) -

Applicant: Rich. Klinger
Dichtungstechnik GmbH & Co KG
Am Kanal 8-10

A-2352 Gumpoldskirchen
ÖSTERREICH

Order of: 28.11.2003 (Ref.: Mü)

Field of application: large and small gaskets (Category D1 and D2)
cold water area

Product: KLINGERSIL®C-4400 (cyan)

Specimen: test plates (measuring: 209 mm x 148 mm x 1,5 mm)

Date of receipt: 22.12.2003

Sampler: received by mail

Start of migration test: 17.02.2004

Assesment:

The test plates KLINGERSIL®C-4400 (cyan) arrived here 22.12.2003 meets the requirements of the KTW-Recommendations for "large and small gaskets" (Category D1 and D2) in the cold water test (23°C). The test results are listed in the enclosure.

This test report is valid beginning with date of issue and ending by 16.04.2009, as far as there are no changes in the formula. After this time it can be extended for further 5 years if demanded.

Gelsenkirchen, 04.08.2004



The Director of the Institute
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The test results refers to the specimen.

The test report consists of 1 page and 1 enclosure.

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Verein zur Bekämpfung der Volkskrankheiten
im Ruhrkohlengebiet e.V. Gelsenkirchen

TEST RESULTS
„cold water test“

Product: KLINGERSIL®C-4400 (cyan)
Formula: NBR-rubber (submitted and checked)
Surface of the test pieces: migration test: 2520 cm² ; chlorine demand test: 34,4 cm²
Volume of test water: migration test: 2660 ml ; chlorine demand test: 3430 ml
Application: large and small gaskets (Category D1 and D2)
S/V-Ratio: 1 : 25
concentration of lead and zinc in the material:
content of lead: 0,0008 % (limid: 0,003 %)
content of zinc: 0,5 % (limid: 3 %)
monom. Acrylonitrile: <0,5 mg/kg (limid: 1 mg/kg)

Test / Parameter				Requirements for "large gaskets" (D1) 3 rd , extraction (7.-9. day)
	1.-3. day	4.-6. day	7.-9. day	
colour	colourless	colourless	colourless	n.s.e.
turbidity	clear	clear	clear	n.s.e.
tendency to foam formation	none	none	none	n.s.e.
TON (23°C)	1-2 *)	1-2 *)	1	< 2
TFN (23°C)	n.e.	n.e.	1	< 2
total organic carbon (TOC) mg/m² x d	2,1	1,7	1,2	≤ 60
chlorine demand (free Cl₂) mg/m² x d	70	47	33	≤ 75
formaldehyde mg/m² x d	<1	<1	<1	≤ 25
phenols mg/m² x d	0,04	<0,02	<0,02	≤ 6,25
prim. aromatic amines mg/m² x d	<0,06	<0,06	<0,06	≤ 0,12

*) temporary detection of TON

n.s.e. no significant effect
n.e. not examined
TON threshold odour number
TFN threshold flavour number

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