

# Test Report

## Repoxal<sup>®</sup> Kleber TW

Test for hygienic suitability in contact with drinking water  
acc. to EN 16421:2014-12, Method 2

W-347794e-21-SI/Krü | 28.07.2021

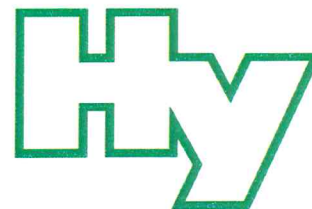
tested by: Hygiene-Institut des Ruhrgebiets, Gelsenkirchen

# Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Director: Dr. Thomas-Benjamin Seiler

Legal Entity: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.



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Reference: W-347794ean-21-SI/Krü  
Contact person: Mrs. Dr. Ch. Schell

Gelsenkirchen, 28.07.2021

## Test for hygienic suitability in contact with drinking water pursuant to EN 16421: 2014-12, Method 2

Your order dated 30.03.2021

Dear Madam/Sir,

please find enclosed the test report **W-347794e-21-SI/Krü** for the material **Repoxal Kleber TW**.

The composition check of the above-mentioned product was carried out in accordance with the requirements of Chapter 5.2 of the KTW evaluation criteria (KTW-BWGL).

*From microbiological point of view the material mentioned above fulfills the requirements pertaining to the enhancement of microbial growth pursuant to KTW-BWGL (EN 16421: 2014-12, Method 2, Measured by biofilm volume).*

*The composition requirements are met.*

Evidence that the other requirements of the KTW evaluation criteria (as of 2021-03) are met can be verified by an examination in accordance with the requirements of the KTW-BWGL.

This letter does not represent a certification in terms of the recommendation for conformity attestation of product hygiene suitability for drinking water of the Federal Environmental Agency. The test results and assessments refer exclusively to the test item.

Best regards  
The Director of the Institute

p.p.

Dr. Ch. Schell  
Head of Department Microbiological Material and Hygiene Testings

**Enclosure: test report**

Our General Terms and Conditions (GTC) apply exclusively (<http://www.hyg.de>)

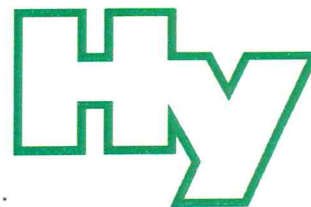
Legal Entity: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V., Register: VR 519 Local Court Gelsenkirchen (Germany); VAT ID: DE125018356  
Directorate: Prof. Dr. Jürgen Kretschmann (Head), Dr. Emanuel Grün, Dr. Dirk Waider, Joachim Löchte, Dr. Thomas-Benjamin Seiler (Executive Member).

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Institut für Umwelthygiene und Toxikologie

Direktor: Dr. Thomas-Benjamin Seiler

Träger: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.



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Our reference: W-347794e-21-SI/Krü  
Contact person: Mrs. Dr. Schell

Gelsenkirchen, 28.07.2021

## TEST REPORT

Test pursuant to EN 16421: 2014-12, Influence of materials on water for human consumption, Method 2 – Measured by biofilm volume

**Client:** Max Frank GmbH & Co. KG  
Mitterweg 1  
94339 Leiblfling

**Ordering date:** 30.03.2021

### Description of the material:

Test material:	<b>Repoxal Kleber TW</b>
Composition:	recipe submitted and checked (11334)
Processing instructions:	for specifications, consult the client
Field of application:	for specifications, consult the client
Quantity of material per area unit:	for specifications, consult the client

### Test samples:

Nature and property:	7 pcs. of stainless steel plates, coated on both sides, grey, 20 cm x 20 cm
Manufacturing:	description submitted by the client
Processing conditions:	description submitted by the client
Production Place:	description submitted by the client

This test report consists of 3 pages

The test results refer exclusively to the examined test specimens and the current statutory regulations. The validity of the document expires in case of modifications in the composition of the material or the processing conditions.

Our accreditation certificate is available at <http://www.hyg.de>. Tests which do not fall within the accreditation are marked.

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Deutsche  
Akkreditierungsstelle  
D-PL-13042-02-00

**Date of receipt of test samples:** 12.04.2021  
**Condition at reception:** individually in aluminum foil  
**Storing conditions in the testing lab:** at room temperature, dark, dry

**Test conditions:**

The tests were performed in accordance with the requirements contained in EN 16421: 2014-12, Method 2. Details regarding testing procedures, as well as testing conditions will be given in said Standard. The surface of the examined test pieces totals to 800 cm<sup>2</sup> each. Using two test items per test period the following test scheme was applied:

- monthly sampling of surface biomass (test period 3 months altogether)
- sampling after 2 months (test period 2 months altogether)
- sampling after 3 months (test period 3 months altogether)

Prior to testing, the test specimens were placed in running tap water for 20 hours, followed by a disinfection procedure using 1% chlorine bleach for 30 ± 5 minutes and then rinsed with drinking water.

**Time of exposure:**

<b>1-month samples</b>	<b>1a:</b>	1 <sup>st</sup>	test period from 28.04.2021 to 27.05.2021
	<b>1b:</b>	2 <sup>nd</sup>	test period from 27.05.2021 to 22.06.2021
	<b>1c:</b>	3 <sup>rd</sup>	test period from 22.06.2021 to 20.07.2021
<b>2-month samples</b>	<b>2a:</b>	1 <sup>st</sup>	test period from 28.04.2021 to 22.06.2021
<b>3-month samples</b>	<b>3a:</b>	1 <sup>st</sup>	test period from 28.04.2021 to 20.07.2021

The exposure took place in containers filled with ground water of drinking water quality at a continuous flow rate of approx. 20 l/h over a period of three months. The water temperature ranged from 10.4°C to 11.4°C.

After one, two and three months the surfaces of the test pieces, as well as the corresponding negative reference samples (stainless steel) and positive reference samples (paraffin) were scraped clean in order to examine for biofilm formation. Afterwards, the surface biomass was transferred to suitable centrifuge tubes. The subsequent centrifugation was carried out at 3.000 x g for 10 minutes followed by the determination of the volume of the sediment.

**Special observations / deviations:**

None

**Test results:**

The positive reference sample (pK) showed a pronounced formation of biofilm during all test periods. There was no formation of surface biomass on the negative reference sample (nK).

The results of the analyses of the single specimens of 800 cm<sup>2</sup> surface in total, pursuant to EN 16421: 2014-12, Method 2 were as follows:

**Volume of surface biomass**

(single values and arithmetic mean of 2 test pieces, given in ml / referring to 800 cm<sup>2</sup>)

Start of test: 28.04.2021		1-month values		2-month values		3-month values
28.04.2021 – 27.05.2021	1a	(< 0.01/< 0.01)		2a (< 0.01/< 0.01)		
	nK	< 0.01			-	
	pK	≥ 1.5			-	
27.05.2021 – 22.06.2021	1b	(< 0.01/< 0.01)	nK	< 0.01	3a	(0.03/0.03)
	nK	< 0.01	pK	≥ 1.5	nK	< 0.01
	pK	≥ 1.5			pK	≥ 1.5
22.06.2021 – 20.07.2021	1c	(< 0.01/< 0.01)				
	nK	< 0.01				
	pK	≥ 1.5				

Limiting values [ml / 800 cm<sup>2</sup>] pursuant to KTW-BWGL (as of 9 March 2021)

General application:	≤ (0.05 + 0.02)	≤ (0.05 + 0.02)	≤ (0.05 + 0.02)
Negative Control:	< 0.01 ml	< 0.01 ml	< 0.01 ml
Positive Control:	≥ 1.5 ml	≥ 1.5 ml	≥ 1.5 ml

The Director of the Institute  
 p.p.

Dr. Ch. Schell  
 Head of Department Microbiological Material and Hygiene Testings

