

Test report No: 406.082/1_e Date: 2011-11-22

Lining for Water Reservoirs Test according to KTW Guideline

English Version

Client: Mehler Technologies GmbH
Rheinstraße 11
41836 Hückelhoven
Germany

Test item: Linings for water reservoirs „Material 7616, light blue”

Test specification: suitability for drinking water contact
according to KTW Guideline

Order: 2010-05-18

Date of sampling: -----

Location of sampling: no sampling by **ofi** employees

Receipt of samples: 2011-07-20

Ref: Nov



1 ORDER

As per order samples of a lining material for water reservoirs based on polyester fibres and PVC (Lining 7616, light blue) were tested for drinking water suitability according to "Leitlinie zur hygienischen Beurteilung von organischen Materialien in Kontakt mit Trinkwasser = "KTW – Leitlinie" (Guideline on hygienic assessment of organic materials in contact with drinking water = KTW-Guideline) for cold water application.

2 SCOPE OF APPLICATION

The results given in this test report have been obtained under the specific conditions of the individual tests. They serve as evidence of conformity of the tested samples with the requirements of the KTW-Guideline.

3 SAMPLE MATERIAL

For testing 5 sealed pouches (formed out of the lining 7616, light blue) with inside dimensions of 20 x 20 cm were delivered by the client.

The construction of the lining, all materials used and their components were disclosed to **ofi** and have been checked on conformity with the KTW-Guideline.

4 TESTS

Test period: 2011-08-22 to 2011-11-18

The tests were performed at the appropriate departments within the scope of the relevant authority to sign according to **ofi**-quality manual.

All tests were done according to the instructions of the KTW Guideline (Issue 2008), application class "Tanks".

Immediately before the migration tests the pouches were rinsed for one hour with tap water, filled with test water for a period of 24 hours (stagnation), again rinsed with tap water for one hour and finished by washing up with test water. The tests were performed according to KTW Guideline by filling the pouches with test water at a temperature of 23°C for three consecutive periods of 72 h. The S/V ratio was 5,75 dm⁻¹ for all tests (migration tests, sensory tests).

Test water for migration tests was purified water (MilliQ), for sensory tests purified tap water (removal of chlorine by activated carbon) was used.

The methods and apparatuses in use are shown in table 1.

Table 1

Parameter	Method	Apparatus (# item number)
Migration	ÖN EN 12873-1	
TOC-Value	ÖN EN 1484	Phoenix 8000 TOC Analyzer # 2.221
TON, TFN	ÖN EN 1420 / EN 1622	pairwise comparison test
Single parameters	GC-MS ; HPLC UV-VIS ofi internal methods	Gas chromatograph Agilent 7890A (#2.665) HPLC DIONEX U3000 (#2.723)

5 RESULTS

The analytical findings of the migration extracts are shown in table 2 together with the requirements specified in KTW Guideline for application class “Reservoirs for non-domestic installation”. The results of the 3rd migration period are decisive for evaluation and have been set off by bold type.

Table 2: test results for cold water test O/V = 5,75 dm⁻¹

Parameter	1. period	2. period	3. period	specifications ¹⁾
<i>Turbidity</i>	n.o.	n.o.	n.o.	n.o.
<i>Colour</i>	n.o.	n.o.	n.o.	n.o.
<i>Foaming</i>	n.o.	n.o.	n.o.	n.o.
<i>Threshold odour number (TON)</i>	2	2	1	< 2
<i>Threshold flavour number (TFN)</i>	1	2	1	< 2
<i>TOC (mg/dm² d)</i>	0,037	0,017	0,021	0,250
<i>Vinylchlorid</i>	< DL*)	< DL*)	< DL*)	not detectable
<i>Single parameters subject to confidentiality</i>	Threshold limits kept**)			

n.o.= not observed ; *) DL=0,3 µg/L **) analytical methods not for all substances available

1) Threshold value for third migration which is decisive for evaluation

The examined pouches made of the lining “Material 7616, light blue” of the Company *Mehler Technologies GmbH* meet the requirements of KTW Guideline for cold water, application class “Reservoirs for non- domestic installation” .

On condition of no change in material and/or processing the validity of the test certificate is limited to 5 years from the date of issue.

The test report no. **406.082/1_e**

comprises 5 pages 2 tables, 0 pictures 0 appendix.

Director in charge
(Dept. Drinking water/Hygiene)



Mag. Elisabeth Novak

Mehler Technologies GmbH
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Germany

TEST CERTIFICATE

according to „Leitlinie zur hygienischen Beurteilung von organischen
Materialien in Kontakt mit Trinkwasser“ des Umweltbundesamtes
(Issue 2008)

Manufacturer: Mehler Technologies GmbH

Samples: Lining “Material 7616, light blue”
made of “Polyester/PVC”

Test: Product testing

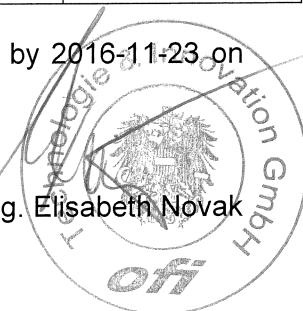
Referring to test report **406.082/1_e** dated **2011-11-22** the tested “Material 7616, light blue” meets the requirements of KTW Leitlinie for the following applications and temperatures:

Applications	Cold water (23°C)	Warm water (60°C)	Hot water (85°C)
Pipes < DN 80	--	--	--
Pipes > DN 80 < DN 300	--	--	--
Pipes > DN 300	--	--	--
Reservoirs for domestic installation	--	--	--
Reservoirs for non- domestic installation	passed	--	--
Ancillaries for pipes < DN 80	--	--	--
Ancillaries for pipes > DN 80 < DN 300	--	--	--
Ancillaries for pipes > DN 300	--	--	--

This test certificate is valid beginning with date of issue and ending by **2016-11-23** on condition of no changes in formulation and production process.

Vienna, 2011-11-23

Mag. Elisabeth Novak



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