

INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.

třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic TESTING LABORATORY - TESTING DIVISION

Issues

ATTEST No. 472117937-01

on samples:

Water level gauge DINEL HLM-25C

client:

DINEL, s.r.o.
U Tescomy 249, 760 01 Zlín, Czech Republic
VAT reg. No.: CZ63476886

Values obtained and the assessment of the technical parameters:

Evaluated technical parameters of <u>the leaching tests meet hygienic requirements</u> of the <u>article 3</u> paragraph 2 of the <u>Decree of the Czech Health Ministry No. 409/2005 Coll.</u> Hygienic requirements for articles intended to come into contact with water and for the water treatment, as amended by the <u>Decree of the Czech Health Ministry No. 446/2021 Coll.</u>, <u>for articles intended into the long time contact with drinking water</u>.

Evaluated sample does not negatively influence the sensorial properties of the drinking water.

Complete assessment of raw materials as required by article 10 of the Decree of the Czech Health Ministry No. 409/2005 Coll., as amended, is not a part of this attest.

The product was assessed as a whole in its end-use condition, only surfaces of the product, which come into direct contact with water, were subjected to leaching test.

This Attest was issued on the basis of following document: ALTR No. 472117937-01 from August 23, 2024, issued by Institut pro testování a certifikaci, a.s. Zlín.

Issued on: /

August 23, 2024

Valid till:

August 31, 2027



Dipl. Ing. Jiří Samsonek, Ph.D. Head of the testing laboratory

Conditions for use of the Attest and associated information:

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on sample:

Water level gauge DINEL HLM-25C



Fig. 1: supplied sample No. 472117937/01

Test results of substances identifiable by TD-GC-MS method – cable insulation, material: black PE

Identified compound ¹⁾ – chemical name	CAS No.	FCM No.	Comment
Aliphatic hydrocarbons 2)	-	3, 9, 10, 13	substance listed in Annex I, with no SML

Notes to the table:

- degradation products; match of the MS spectra of found substances with standard MS spectra from D-base are in the range of 70-95 %
- 2) the better identification could not be done by the method used

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on sample:

Water level gauge DINEL HLM-25C

Abbreviations used:

CAS No. = Unique numerical identifier assigned by the Chemical Abstracts Service

FCM No. = Food Contact Material number

Annex I = Annex I of Commission Regulation (EU) 10/2011 as amended – list of authorised substances

SML= Specific Migration Limit

Evaluation of heavy metals in the mass – cable insulation, material: black PE and cable cover, material: black silicone

Element	11-14	Result of measurement	Uncertainty	Result of Uncertainty measurement 1) 2) cable cover, material: black silicone		
	Unit	cable ins				
Pb - lead	mg/kg	< 20	< 20 -		-	
Cd - cadmium	mg/kg	< 20	-	< 40	-	
Ba - barium	mg/kg	< 150	-	< 100	-	
Se - selenium	mg/kg	< 20	-	< 50	-	
Hg - mercury	mg/kg	< 20	-	< 20	-	
Sb - antimony	mg/kg	< 50	-	< 100	-	
As - arsenic	mg/kg	< 20	-	< 50	-	
Cr - chromium	mg/kg	< 20	-	< 20	-	
Ni - nickel	mg/kg	< 20	-	< 20	-	
V - vanadium	mg/kg	< 20	-	< 20	-	
Sn - tin	mg/kg	< 50	-	< 50	-	
Cu - copper	mg/kg	< 20	-	< 50	-	
Fe - ferrum	mg/kg	< 20	-	21	3	
Mn - manganese	mg/kg	< 20	-	< 20	-	
Zn - zinc	mg/kg	< 20	-	< 50	-	

Notes to the table

- 1) symbol "<" means less than limit of quantification (LOQ) of the analytical method
- 2) uncertainty type B, 10 rel. % from measured value

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Water level gauge DINEL HLM-25C

Evaluated parameters of the leachate prepared according to the annex No. 1 of the Decree of the Health Ministry No. 409/2005 Coll.

Evaluation of the 1st leachate into the testing water after 72 hours

Danamatan	11.34	Parallel	leachate	1.6 4)	Uncerta-	K _{0;1} ³⁾
Parameter	Unit	17937/01-A	17937/01-B	K _{72;1} 1)	inty ²⁾	
Colour	mgPt/l	< 5	6	_ 9)	_ 9)	< 5
Turbidity (nephelom.)	ZF _n	< 0,5	< 0,5	< 0,5	-	< 0,5
рН	-	6,1	6,1	6,1	0,2	5,7
TOC ⁴⁾	mg/l	2,70	3,34	3,02	0,67	< 0,60
CHSK _{Mn} ⁵⁾	mg/l	0,62	0,74	0,68	0,13	-
Pb	μg/l	< 0,90	< 0,90	< 0,90	-	< 0,90
Cd	μg/l	< 0,20	< 0,20	< 0,20	-	< 0,20
Zn	mg/l	0,012	0,013	0,013	0,002	< 0,010
Ва	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Ni	μg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
V	μg/l	< 0,50	< 0,50	< 0,50	-	< 0,50
Co	μg/l	< 0,90	< 0,90	< 0,90	-	< 0,90
Cu	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Mn	mg/l	< 0,002	< 0,002	< 0,002	-	< 0,002
Cr	μg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
Fe	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Phenols	mg/l	< 0,005	< 0,005	< 0,005	-	< 0,005
PAH ⁶⁾	μg/l	< 0,001	< 0,001	< 0,001	-	< 0,001
Benzo(a)pyrene	µg/l	< 0,0004	< 0,0004	< 0,0004	-	< 0,0004
Sum of PAAs ⁷⁾ (LOD = 0,002 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected
Sum of PAAs ⁷⁾ (LOD = 0,005 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected
Conductivity	mS/m	0,17	0,29	0,23	0,13	0,13

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on sample:

Water level gauge DINEL HLM-25C

Evaluation of the 2nd leachate into the testing water after 72 hours

Parameter	Parallel leachate		4)	Uncerta-		
	Unit	17937/01-A	17937/01-B	K _{72;2} 1)	inty ²⁾	K _{0;2} 3)
Colour	mgPt/I	< 5	< 5	< 5	-	< 5
Turbidity (nephelom.)	ZFn	< 0,5	< 0,5	< 0,5	-	< 0,5
рН	-	5,7	5,7	5,7	0,2	5,7
TOC 4)	mg/l	1,46	1,44	1,45	0,09	< 0,60
CHSK _{Mn} ⁵⁾	mg/l	0,49	0,52	0,51	0,05	-
Pb	μg/l	< 0,90	< 0,90	< 0,90	-	< 0,90
Cd	μg/l	< 0,20	< 0,20	< 0,20	-	< 0,20
Zn	mg/l	< 0,010	< 0,010	< 0,010	_	< 0,010
Ва	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Ni	µg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
V	µg/l	< 0,50	< 0,50	< 0,50	-	< 0,50
Co	µg/l	< 0,90	< 0,90	< 0,90	_	< 0,90
Cu	mg/l	< 0,01	< 0,01	< 0,01	_	< 0,01
Mn	mg/l	< 0,002	< 0,002	< 0,002	-	< 0,002
Cr	μg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
Fe	mg/l	< 0,01	< 0,01	< 0,01	_	< 0,01
Phenols	mg/l	< 0,005	< 0,005	< 0,005	-	< 0,005
PAH ⁶⁾	µg/l	< 0,001	< 0,001	< 0,001	_	< 0,001
Benzo(a)pyrene	µg/l	< 0,0004	< 0,0004	< 0,0004	-	< 0,0004
Sum of PAAs ⁷⁾ (LOD = 0,002 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected
Sum of PAAs ⁷⁾ (LOD = 0,005 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected
Conductivity	mS/m	0,02	0,01	0,02	0,02	0,12

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on sample:

Water level gauge DINEL HLM-25C

Evaluation of the 3rd leachate into the testing water after 72 hours

Parameter	Parallel leachate		leachate	1.5 4)	Uncerta-	1.5 2)
	Unit	17937/01-A	17937/01-B	K _{72;3} 1)	inty ²⁾	$K_{0;3}^{3)}$
Flavour	TFN 8)	2	2	2	-	1
Odour	TON 8)	2	2	2	-	1
Colour	mgPt/l	< 5	< 5	< 5	-	< 5
Turbidity (nephelom.)	ZFn	< 0,5	< 0,5	< 0,5	-	< 0,5
рН	-	5,6	5,6	5,6	0,2	5,7
TOC 4)	mg/l	0,88	0,93	0,91	0,08	< 0,60
CHSK _{Mn} 5)	mg/l	0,25	0,19	0,22	0,07	-
Pb	µg/l	< 0,90	< 0,90	< 0,90	-	< 0,90
Cd	µg/l	< 0,20	< 0,20	< 0,20	-	< 0,20
Zn	mg/l	< 0,010	< 0,010	< 0,010	-	< 0,010
Ва	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Ni	µg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
V	µg/l	< 0,50	< 0,50	< 0,50	-	< 0,50
Co	µg/l	< 0,90	< 0,90	< 0,90	-	< 0,90
Cu	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Mn	mg/l	< 0,002	< 0,002	< 0,002	-	< 0,002
Cr	µg/l	< 1,0	< 1,0	< 1,0	-	< 1,0
Fe	mg/l	< 0,01	< 0,01	< 0,01	-	< 0,01
Phenols	mg/l	< 0,005	< 0,005	< 0,005	-	< 0,005
PAH ⁶⁾	µg/l	< 0,001	< 0,001	< 0,001	- Alaski star	< 0,001
Benzo(a)pyrene	µg/l	< 0,0004	< 0,0004	< 0,0004	-	< 0,0004
Sum of PAAs ⁷⁾ (LOD = 0,002 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected

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on sample:

Water level gauge DINEL HLM-25C

Evaluation of the 3rd leachate into the testing water after 72 hours - continuation

Parameter		Parallel leachate			Uncerta-	
	Unit	17937/01-A	17937/01-B	K _{72;3} 1)	inty 2)	$K_{0;3}^{3)}$
Sum of PAAs ⁷⁾ (LOD = 0,005 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	-	no PAA detected
Conductivity	mS/m	0,02	0,01	0,02	0,02	0,13
Methacrylic acid, methyl ester, CAS No. 80-62-6	mg/l	< 0,9	< 0,9	< 0,9	-	< 0,9

Notes to the tables:

- 1) K_{72;n} is the concentration of the analyte after 72 hours of leaching, expressed as an average value from two tested samples of parallel leachates after the subtraction of the blank value, the blank values are not subtracted in case of: odour, flavour, pH and TOC
- the reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%
- 3) K _{0;n} is the concentration of the analyte after 72 hours of leaching in the blank, expressed as an average value from two tested parallels leachates
- 4) TOC = total organic carbon
- 5) CHSK_{Mn} = Permanganate Index
- ⁶⁾ PAH = Polycyclic aromatic hydrocarbon, sum of benzo(b)fluorantene, benzo(k)fluorantene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene
- PAA = primary aromatic amines; these PAAs were screened by LC-MS/MS method: CAS No. 92-67-1, CAS No. 92-87-5, CAS No. 95-69-2, CAS No. 91-59-8, CAS No. 97-56-3, CAS No. 99-55-8, CAS No. 106-47-8, CAS No. 615-05-4, CAS No. 101-77-9, CAS No. 91-94-1, CAS No. 119-90-4, CAS No. 119-93-7, CAS No. 838-88-0, CAS No. 120-71-8, CAS No. 101-14-4, CAS No. 101-80-4, CAS No. 139-65-1, CAS No. 95-53-4, CAS No. 95-80-7, CAS No. 137-17-7, CAS No. 90-04-0, CAS No. 60-09-3, CAS No. 108-45-2, CAS No. 80-08-0, CAS No. 88-68-6, CAS No. 106246-33-7 with limit of detection (LOD) of individual PAA = 0,002 mg/l and detection of presence of selected other PAAs: CAS No. 95-68-1, CAS No. 87-62-7, CAS No. 2243-62-1, CAS No. 62-53-3, CAS No. 95-51-2, CAS No. 108-42-9, CAS No. 106-49-0.
 - No. 2243-62-1, CAS No. 62-53-3, CAS No. 95-51-2, CAS No. 108-42-9, CAS No. 106-49-0, CAS No. 106-50-3, CAS No. 823-40-5, CAS No. 121-69-7, CAS No. 6582-52-1, CAS No. 1208-52-2, CAS No. 6358-64-1, CAS No. 95-82-9, CAS No. 94-70-2, CAS No. 2835-68-9, CAS No. 81-16-3, CAS No. 88-44-8, CAS No. 49564-57-0, CAS No. 95-23-8, CAS No. 132-32-1, CAS No. 95-54-5, CAS No. 67014-36-2, CAS No. 156-43-4, CAS No. 90-41-5 with limit of detection (LOD) of individual PAA = 0,005 mg/l
- 8) TFN = threshold flavour number; TON = threshold odour number

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on sample:

Water level gauge DINEL HLM-25C

⁹⁾ average value and uncertainty are not listed, because one of the measured value is below the limit of quantification of the analytical method symbol "<" means less than limit of quantification (LOQ) of the analytical method</p>

Summary results of evalution 1st - 3rd leachate into the testing water at (23±2) °C

Parameter	Unit	K _{72;1} 1)	K _{72;2} 1)	K _{72;3} 1)	Limit 2)
Flavour	TFN 7)	-	-	2	acceptable (max. 2)
Odour	TON 7)	-	-	2	max. 2
Colour	mgPt/I	< 5; 6	< 5	< 5	max. 20
Turbidity (nephelometry)	ZFn	< 0,5	< 0,5	< 0,5	max. 5
pН	-	6,1	5,7	5,6	-
TOC 3)	mg/l	3,02	1,45	0,91	max. 1,0
CHSK _{Mn} ⁴⁾	mg/l	0,68	0,51	0,22	max. 0,90
Pb	µg/l	< 0,90	< 0,90	< 0,90	max. 1,0
Cd	µg/l	< 0,20	< 0,20	< 0,20	max. 0,50
Zn	mg/l	0,013	< 0,010	< 0,010	max. 0,30 8)
Ва	mg/l	< 0,01	< 0,01	< 0,01	max. 0,07 8)
Ni	µg/l	< 1,0	< 1,0	< 1,0	max. 2,0
V	µg/l	< 0,50	< 0,50	< 0,50	max. 5,0 8)
Co	µg/l	< 0,90	< 0,90	< 0,90	max. 1,0 8)
Cu	mg/l	< 0,01	< 0,01	< 0,01	max. 0,10
Mn	mg/l	< 0,002	< 0,002	< 0,002	max. 0,005
Cr	µg/l	< 1,0	< 1,0	< 1,0	max. 5,0
Fe	mg/l	< 0,01	< 0,01	< 0,01	max. 0,02
PhenoIs	mg/l	< 0,005	< 0,005	< 0,005	max. 0,005 8
PAH ⁵⁾	µg/l	< 0,001	< 0,001	< 0,001	max. 0,010

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on sample:

Water level gauge DINEL HLM-25C

Summary results of evalution 1st – 3rd leachate into the testing water at (23±2) °C - continuation

Parameter	Unit	K _{72;1} 1)	K _{72;2} 1)	K _{72;3} 1)	Limit 2)	
Benzo(a)pyrene	µg/l	< 0,0004	< 0,0004	< 0,0004	max. 0,0010	
Sum of PAAs ⁶⁾ (LOD = 0,002 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected	max. 0,01 ⁸⁾	
Sum of PAAs ⁶⁾ (LOD = 0,005 mg/l)	mg/l	no PAA detected	no PAA detected	no PAA detected		
Conductivity	mS/m	0,23	0,02	0,02	max. 12,5	
Methacrylic acid, methyl ester, CAS No. 80-62-6	mg/l	-	-	< 0,9	max. 6 ^{9),10)}	

Notes to the table:

- 1) K_{72;n} is the concentration of the analyte after 72 hours of leaching, expressed as an average value from the dual samples of parallel leachates after the subtraction of the blank value, the blank values are not subtracted in case of: odour, flavour, pH and TOC; symbol ",<" means less than limit of quantification (LOQ) of the analytical method</p>
- 2) 10% of the hygienic limit for drinking water according to the Czech Ministry of Health Decree No. 252/2004 Coll., as amended, annex 1; according to the article 3 paragraph 2 of the Decree of the Czech Health Ministry No. 409/2005 Coll., as amended, the limit valid for TOC is 20 % of the hygienic limit, for CHSK_{Mn} is 30 % of
 - the hygienic limit, for sensorial properties are valid the hygienic limits of the above mentioned Decree; limits are valid for parameter values of the third leachate K _{72;3}
- 3) TOC = total organic carbon
- 4) CHSK_{Mn} = Permanganate Index Method
- ⁵⁾ PAH = Polycyclic aromatic hydrocarbon, sum of benzo(b)fluorantene, benzo(k)fluorantene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene
- PAA = primary aromatic amines; these PAAs were screened by LC-MS/MS method: CAS No. 92-67-1, CAS No. 92-87-5, CAS No. 95-69-2, CAS No. 91-59-8, CAS No. 97-56-3, CAS No. 99-55-8, CAS No. 106-47-8, CAS No. 615-05-4, CAS No. 101-77-9, CAS No. 91-94-1, CAS No. 119-90-4, CAS No. 119-93-7, CAS No. 838-88-0, CAS No. 120-71-8, CAS No. 101-14-4, CAS No. 101-80-4, CAS No. 139-65-1, CAS No. 95-53-4, CAS No. 95-80-7, CAS No. 137-17-7, CAS No. 90-04-0, CAS No. 60-09-3, CAS No. 108-45-2, CAS No. 80-08-0, CAS No. 88-68-6, CAS No. 106246-33-7 with limit of detection (LOD) of individual PAA = 0,002 mg/l and detection of presence of selected other PAAs: CAS No. 95-68-1, CAS No. 87-62-7, CAS No. 2243-62-1, CAS No. 62-53-3, CAS

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on sample:

Water level gauge DINEL HLM-25C

No. 95-51-2, CAS No. 108-42-9, CAS No. 106-49-0, CAS No. 106-50-3, CAS No. 823-40-5, CAS No. 121-69-7, CAS No. 6582-52-1, CAS No. 1208-52-2, CAS No. 6358-64-1, CAS No. 95-82-9, CAS No. 94-70-2, CAS No. 2835-68-9, CAS No. 81-16-3, CAS No. 88-44-8, CAS No. 49564-57-0, CAS No. 95-23-8, CAS No. 132-32-1, CAS No. 95-54-5, CAS No. 67014-36-2, CAS No. 156-43-4, CAS No. 90-41-5 with limit of detection (LOD) of individual PAA = 0,005 mg/l

- 7) TFN = threshold flavour number; TON = threshold odour number
- 8) 10% of the hygienic limit for drinking water according to the Czech Ministry of Health Decree No. 409/2005 Sb., as amended; for PAA are valid the hygienic limit of the above mentioned Decree; limits are valid for parameter values of the third leachate K 72;3
- 9) specific migration limit (SML) according to Commission Regulation EU 10/2011, as amended, Annex I
- ¹⁰⁾ SML = 6 mg/kg for the sum of substances listed under restriction group no. (23), expressed as methacrylic acid



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INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s. třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

Testing Laboratory – D2

ATTEST No. 472117937-01

Sample identification:

Table I: Samples description and identification

ITC's identification number	Sample identification by client	Description of submitted sample
472117937/01	Water level gauge DINEL HLM-25C	stainless steel part + rubber cover + black plastic cable – see Fig. 1

According to the client's declaration, the parts of the water level gauge are as follows:

- housing, material: stainless steel 1.4404
- housing seal, material: black elastomer FPM
- piezoresistant OEM pressure sensor, material: aluminum oxide
- sensor seal, material: black FPM elastomer
- cable insulation, material: black PE
- cable cover, material: black Elastosil silicone
- Loxeal 85-86 thread adhesive

The total area of the water level gauge that comes into contact with water is 113.1 cm².

The black cable has a diameter of 0,74 cm, a cable length of 550 cm was used for the leaching test.

The documents specifying the materials and suppliers of the individual parts of the water level gauge were supplied by the client together with the sample (except for the PE insulation of the cable). At the client's request, this information is subject to confidentiality and is archived in the ITC archives.

Sampling method used:

The test sample was collected and supplied to the laboratory by the client. The laboratory is not responsible for this way of sampling. The results apply to the sample received.

Work request:

The client requested evaluation of selected hygienic parameters of the sample according to the Decree of Czech Health Ministry No. 409/2005 Coll. *Hygienic requirements for articles intended to come into contact with water and for the water treatment*, as amended by the Decree of the Czech Health Ministry No. 446/2021 Coll., in accordance with the law No. 258/2000 Coll. on Public Health Protection, as amended, for contact with drinking water.

The relevant parameters given by the Czech Ministry of Health Decree No. 409/2005 Coll., as amended, for the material were tested.

Opinions and interpretations:

<u>Evaluation of fulfilling of the requirements of the Decree of the Health Ministry No. 409/2005 Coll.</u> <u>for articles intended into the short-term contact with drinking water:</u>

- In the supplied samples heavy metals content was determined by XRF spectroscopy. All critical
 elements were under limit of detection of the used analytical method see tables on the pages 3 of
 this attest.
- According to the article 10 of the Decree of the Czech Health Ministry No. 409/2005 Coll. for the
 manufacturing of plastics and products made from plastics intended into contact with drinking
 water, the products shall only be made of the monomers and other initial substances and additives
 included in the list of monomers and other initial substances listed in to the Decree of the Czech

Conditions for use of the Attest and associated information:

- 1. The Attest applies only to the sample tested by our laboratory.
- 2. The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.
- 3. If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.

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INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s. třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic

Testing Laboratory - D2

ATTEST No. 472117937-01

Health Ministry No. 38/2001 Coll., annex 3 and Commission Regulation (EU) No. 10/2011. The migration of individual components of the plastic materials and products shall not exceed specific migration limits (SML) or other restrictions included in the list of substances.

The client did not submited complete documentation declaring the conformity of the raw material used for manufacturing with the requirements of legislation.

In order to identify low molecular substances and degradation products of aditives the test TD-GC-MS was performed on the cable insulation, material: black PE –

no substances restricted by the specific migration limit were identified by this method - see table on page 2 of this attestation.

• The supplied samples are intended into the contact with drinking water.

The article intended into the direct long time contact with drinking water shall meet requirements of the article 3 paragraph 2 of the Decree of the Czech Health Ministry No. 409/2005 Coll., as amended - shall not exceed 10 % of the hygienic limit set for drinking water by to the Health Ministry Decree No. 252/2004 Coll. According to the article 3 paragraph 2 of the Decree of the Czech Health Ministry No. 409/2005 Coll., as amended, the limit valid for TOC is 20 % of the hygienic limit, for CHSK_{Mn} is 30 % of the hygienic limit, for sensorial properties are valid the hygienic limits.

Three subsequent 72-hours leachates into the testing water (deionised water of temperature 23 °C according to the conditions from Annex No. 1 of the Health Ministry Decree No. 409/2005 Coll., as amended) were prepared from the supplied samples.

The test results for parallel leachates, the average values subtracted by the blank values and blank values are listed in the tables on pages 4 - 7 of this attest. Summary results of evaluation $1^{st} - 3^{rd}$ leachate into the testing water at (23 ± 2) °C, together with limit values are listed in the table on the pages 8 and 9 of this attest.

The tested parameters from the third leachate meet the requirements of the article 3 paragraph 2 of the Health Ministry Decree No. 409/2005 Coll., as amended by the Decree of the Czech Health Ministry No. 446/2021 Coll., on the products intended into the direct long time contact with drinking water.

The supplied samples doesn't negatively influence the sensorial properties of the water.

Complete assessment of raw materials as required by article 10 of the Decree of the Czech Health Ministry No. 409/2005 Coll., as amended, is not a part of this attest.

Evaluated by:

MUDr. Beata Janoušková, on August 23, 2024.

Conclusion:

The comparison of the obtained values of the samples with the requirements of the Health Ministry Decree No. 409/2005 Coll., as amended and the evaluation of the conformity with this regulation are listed on the page 1 of this Attest.

Dipl. Ing. Daniel Vít
Head of the laboratory of analytical chemistry and microbiology

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