



HELLENIC REPUBLIC



ΑΑΔΕ

Independent Authority
for Public Revenue (IAPR)

**DIRECTORATE GENERAL OF THE
GENERAL CHEMICAL STATE LABORATORY
SERVICE: B' CHEMICAL SERVICE OF ATHENS
DEPARTMENT: SECTION B' - Food Contact Materials**

Date: 14-05-2021
Our ref: 30/013/000/68/07-01-2021

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V. Moira Str., Xiropigado,
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19600 Industrial Area Mandra Attikis, Greece

TEST REPORT

Sending Authority : NEOTEX S.A.
Sending Authority Reference No – Date : / 16-11-2020
Sampling Authority : NEOTEX S.A.
Date of receipt : 07-01-2021

GCSL Sample No : 013/000/66/2021
Type of material : Installation's varnish or coating
Detailed description of the material : Specimens coated with "two component cementitious waterproofing system Revinex Flex 2006"
Sampling Authority Reference No - Date : / 16-11-2020
Sample integrity : -

Date of Analysis: From: 21-01-2021 To: 22-03-2021

TEST RESULTS

Parameter considered	Test method	Result	Recommended Limit ¹	Chem. Serv./ Name of Analyst
Determination of the content of the cementitious coating in metals (As, Cd, Cr, Ni, Pb)	Inductively Coupled Plasma (ICP-OES)	For the cementitious coating ² : As: <0.002% w/w Cd: 0.00035% w/w Cr: 0.005% w/w Ni: 0.004% w/w Pb: <0.002% w/w	As: <0.01% w/w Cd: <0.001% w/w Cr: <0.05% w/w Ni: <0.05% w/w Pb: <0.05% w/w	B' Chemical Service of Athens/ A. Kontogeorgakos
Estimation of the specific migration of the organic additives contained in the cementitious coating	Semi-quantitative estimation of the specific migration of chemical substances from plastics with GC-FID and GC-MSD (Method code: EM4)	For the cementitious coating ² : $\lambda < 1$, specific migration is considered negligible The by-product 4-phenylcyclohexene is being identified (CAS No 4994-16-5)		B' Chemical Service of Athens/ E. Dessipri

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Total Organic Carbon - TOC	Determination of TOC in water with oxidative catalysis and IR (TOC-W)	In the water from the 1 st migration cycle ^{2, 3} : increase in comparison with the blank that corresponds to $C_{tap} = 0,13 \text{ mg/L}$ In the water from the 2 nd migration cycle ^{2, 3} : increase in comparison with the blank that corresponds to $C_{tap} = 0,06 \text{ mg/L}$	< 2 mg/L	A' Chemical Service of Athens/ K. Stathopoulou ⁴
Migration of metals (Cd, Cr, Ni)	Inductively Coupled Plasma (ICP-OES)	Migration in the 1 st cycle (C_{tap}) ^{2, 3} : Cd: < 0,2 µg/L Cr: 1 µg/L Ni: < 0,4 µg/L Migration in the 2 nd cycle (C_{tap}) ^{2, 3} : Cd: < 0,2 µg/L Cr: 1 µg/L Ni: < 0,4 µg/L	Cd < 0,5 µg/L Cr < 2,5 µg/L Ni < 2 µg/L	A' Chemical Service of Athens/ K. Stathopoulou ⁴
Organic compounds	Determination of organic substances in water by solid phase microextraction from the headspace of the sample (SPME /GC-MS)	The by-product 4-phenylcyclohexene (CAS No 4994-16-5) is identified in decreasing amounts in the water from the 1 st , 2 nd and 3 rd migration cycle. Its concentration in the water from the 3 rd migration cycle is calculated semi- quantitatively ^{3, 5} to correspond to $C_{tap} = 0.2 \text{ µg/L}$ The following are also identified: ethylbenzene ⁶ benzene, 1,3-dimethyl ⁶ o-xylene ⁶ mesitylene ⁶ benzene, 1,2,4-trimethyl ⁶	< 1 µg/L	B' Chemical Service of Athens/ E. Dessipri

Labelling check:

OPINION (FINAL ASSESSMENT):

Decision rule applied: For the reliable identification of an organic compound in the sample with the use of gas chromatographic method mass spectrometry in full scan mode (GC/MS - full scan), the spectrum of the corresponding peak in the chromatogram of the sample, after subtraction of the background spectrum, should be ≥ 80 % similar to the reference spectrum of that compound in the library used. Additionally, the relevant intensities of four ions should be equal to those of the reference spectrum, within the tolerance limits, typically ± 25 %.

Notes:

1. The sample analysed "two component cementitious waterproofing system system Revinex Flex 2006", fulfils the requirements of Article 11 paragraph 1 of Directive (EU) 2020/2184 of the European Parliament and of the Council of 16/12/2020 (DWD), regarding the analytical parameters tested, for use in contact with drinking water at ambient temperature and for containers with a maximum surface to volume ratio of 0.5 dm⁻¹.

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In the absence of national measures and pending the adoption of the implementing acts referred to in Article 11 paragraph 2 of DWD, the methodologies of testing and recommended limits of the common approach further to the 4 MS initiative (Assessment of Cementitious Products in Contact with Drinking Water, 4MS Common Approach, Draft Sep 2018, available online at <https://www.umweltbundesamt.de/en/topics/water/drinking-water/distributing-drinking-water/approval-harmonization-4ms-initiative#undefined>) were adopted for the assessment. The composition of the coating, as declared by the producer and the available declarations of its suppliers, was screened against the relevant "Admixture Positive List", available online at the above mentioned address.

2. For the tests, the producer prepared and delivered 12 specimens of stainless steel, of dimensions 0,5 dm × 1 dm, coated in both sides (total specimen surface 1 dm²) as well as one specimen of self-supported coating. The determinations of the content of the sample in metals and of the estimation of the specific migration of the organic additives were performed in the self-supported coating.

3. For every migration test 5 specimens (5 dm²) were brought in contact with 1 L tap water (Athens Water Supply - EYDAP) (ratio 5 dm⁻¹). Migration conditions: 3 cycles, 3 days at 23 °C for every cycle. The specimens were preconditioned according to the procedure described in EN 14944. The migration testing was performed in duplicate. To calculate the estimated tap levels (C_{tap}) of the parameters determined during the migration tests, the factor 4 day / dm, that is considered suitable for storage tanks, was used and the following formula was applied: C_{tap} = (x - blank) (µg / L) × 1 (L) × 4 (day / dm) × 1 / (3 days) × 1 / (5 dm²), where x is the average of the two measurements for each cycle of migration tests, from which the value of the procedural blank (tap water that was simultaneously subjected to the same procedure as the specimen without coming into contact with them) is deducted.

4. The analysis was performed by the A' Chemical Service of Athens and the results were notified to us with their Test Report (Ref. no 30/015/000/298/2021 - 22/03/2021).


5. For the quantification of the by-product 4-phenylcyclohexene, styrene was used as external standard and styrene-d8 as internal standard.

6. Volatile impurities. Their concentration was estimated semi-quantitatively to be much lower than the relative limits (ethylbenzene 30 µg/L; xylene 50 µg/L; toluene 60 µg/L) as referred in the 4MSI Common Approach on Organic Materials in Contact with Drinking Water, available online at:

https://www.umweltbundesamt.de/sites/default/files/medien/5620/dokumente/ca-om_part_b_-_positive_list_of_starting_substances_for_om_feb_2021corr02.pdf

7. The sample was prepared and delivered for analysis by the applicant. The rest of the sample will be destroyed at the laboratory, if not requested by the client within one month.

The Head of the Chemical Service

Dr Eugenia Lampi


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