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Bellaterra	:	21th December 2012
Dossier number	:	***12/5869-1979***
Petitioner Reference	:	***KIMIA, S.P.A.*** Via del Rame, 73 06134 PERUGIA (ITALIA)

TEST REPORT

RECEIVED MATERIAL:

On 17th October 2012, a sample of mortar was received at Applus+LGAI, with the following references, according to the Petitioner:

KIMIA SK68 1-205

REQUESTED TESTS:

1- Influence of cementitious products on water intended for human consumption: Migration of substances, UNE-EN 14944-3:2008

TEST DATE: From 17/10/2012 to 20/12/2012

RESULTS : See attached pages.

Firmado digitalmente por Juan Martinez Egea

Responsible for Construction Materials
LGAI Technological Center S.A.

Firmado digitalmente por Raúl Martín García

Technician Responsible
LGAI Technological Center S.A.

The results included in this document refer exclusively to the indicated materials and has been tested according to the specifications given.

LGAI Technological Center S.A. Inscrita en el registro Mercantil de Barcelona, Tomo 35.803, Folio1, Hoja Nº B-266.627 Inscripción 1ª C.I.F. : A-63207492

RESULTS:

MIXING: BETONFIX 300 : KIMITECH ELASTOFIX - 100 : 33 parts

APPLICATION: First coat: 1,5 kg/m^2/mm - After 24 hours, second layer: 2,0 kg/m^2/mm

1- Influence of cementitious products on water intended for human consumption: Migration of substances, UNE-EN 14944-3:2008

- Extraction enviroment: Test water indicated in Norm EN 14944-3. Chlorinated water containing 1 ppm chlorine.

- Migration temperature: 40ºC

- Contact time: The sample is washed several times , as instructed in standard EN 12873. Next, three 72-hour cycles are performed, thereby obtaining three testing samples.

Parameters are analysed during the initial 72-hour cycle; only the parameters that are beyond the limits of RD 140/2003 in the first cycle are reapeated in the second and third cycle.

- Volume of the sample: 1 litre for each of the 72-hour cycles.

- Contact surface: 130 cm^2

- Surface/volume ratio: 130 cm^2/l.

Product Features:

PARAMETER	RESULT	LEGISLATIVE NORM
Colour (mg/Pt/Co)	1,6	≤ 15
Flavour: Dilution Rate	0	≤ 3
Odour: Dilution Rate	0	≤ 3
Conductivity (µS/cm)	588,0	≤ 2500
Reaction at 20 ppm chlorine	No anomalous changes	No anomalous changes

Control of content:

PARAMETER	RESULT	LEGISLATIVE NORM
Turbidity (UNF)	1,6	≤ 5
pH (upH)	9,4	≥ 6,5 ≤ 9,5
Oxidizability (mg O2 / l)	2,8	≤ 5
Total Organic Carbon (TOC) (mg/l)	5,7*	No changes
Combined Residual Chlorine (mg/l)	<0,01	≤ 2
Residual Free Chlorine (mg/l)	<0,01	≤ 1
Chlorides (mg/l)	47,6	≤ 250

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Control of content:

PARAMETER	RESULT	LEGISLATIVE NORM
Ammonia (mg/l)	--	≤ 0,5
- 1st migration	1,6	
- 2nd migration	0,45	
Cyanides (µg/l)	<10,0	≤ 50
Sulphates (mg/l)	1,3	≤ 250
Fluorides (mg/l)	< 1,0	≤ 1,5
Nitrates (mg/l)	<10	≤ 50
Nitrites (mg/l)	<0,1	≤ 0,5
Sodium (mg/l)	55,0	≤ 200
Volatile organic compounds		
- 1,2 Dichlorethane (µg/l)	<1,0	≤ 3
- Trichlorethane + tetrachlorethane (µg/l)	<1,0	≤ 10
Aluminium (Al) (µg/l)	--	≤ 200
- 1st migration	274,0	
- 2nd migration	192,0	
Antimony (Sb) (µg/l)	<3,0	≤ 5
Arsenic (As) (µg/l)	<5,0	≤ 10
Boron (B) (mg/l)	<0,1	≤ 1
Cadmium (Cd) (µg/l)	<2,0	≤ 5
Copper (Cu) (mg/l)	0,01	≤ 2
Chromium (Cr) (mg/l)	<4,0	≤ 50
Iron (Fe) (µg/l)	<15,0	≤ 200
Manganese (Mn) (µg/l)	<7,0	≤ 50
Mercury (Hg) (µg/l)	<1,0	≤ 1
Nickel (Ni) (µg/l)	<7,0	≤ 20
Lead (Pb) (µg/l)	<25,0	≤ 25
Selenium (Se) (µg/l)	<5,0	≤ 10
Benzene (µg/l)	<0,5	≤ 1

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Control of content:

PARAMETER	***RESULT***	***LEGISLATIVE NORM***
Polycyclic Aromatic Hydrocarbons		
- Benzopyrene	<0,01	≤ 0,01
- Sum of Polycyclic Aromatic Hydrocarbons (µg/l)	<0,1	≤ 0,1
Trihalomethanes (µg/l)	<5,0	≤ 100
Pesticides		
- Aldrin (µg/l)	<0,01	≤ 0,03
- Dieldrin (µg/l)	<0,01	≤ 0,03
- Heptachlorine (µg/l)	<0,01	≤ 0,03
- Heptachlorine epoxide (µg/l)	<0,01	≤ 0,03
Total pesticides (µg/l)	<0,5	≤ 0,5
Acrylamide (µg/l)		
- 1st migration	0,6	≤ 0,1
- 2nd migration	0,4	
- 3rd migration	0,1	
Epiclorhidrine (µg/l)	< 0,07	< 0,1

Conclusion:

The material complies with the requirements of the Real Decreto 140/2003.