

Firestone Building Products  
Attn. ir F. Dejonghe  
Ikaroslaan 75  
1930 Zaventem

## ANALYSIS REPORT 20090045

Project number : 08.12.839

Report date : 12th February 2009

### 1. Information about the material

parameters (test code)	Unity	Value
Your reference		Firestone UltraPly TPO 045
Our reference		2009030058
Date of receipt		15th January 2009
Matrix		Solid product

### 2. Sample features

The tests have been performed on samples of 30cm<sup>2</sup>.

The surface was submerged in 1L water (either rain water or ultrapure water depending on the parameter which was to be tested). The samples have been submerged, taking into account that only the exposed surface contributed to the migration. The samples have been eluted this way for 24h. The test was performed in stagnant water.

The "blank controls" have been treated in the same way as the samples (same containers, test duration, identical test environment, ...).

Hofman S.  
Quality manager

M. Vercruyssen  
Managing director

*This report contains 2 pages*

*pag. 1*

*The above-mentioned results only concern the above-mentioned sample. Any partial reproduction of this analysis report is only allowed after a written permission of BECEWA. Further information about the analysis method (test code) can always be obtained on written demand..(B) : analysis under Beltest accreditation, \*:execution by third party.*

**CONTINUATION ANALYSIS REPORT 20090045**

**3. Results**

The water that was exposed to the sample material “Firestone Ultraply TPO 045”, was tested to know whether or not it is suitable to be used for human purposes (dishwasher, washing machine, toilet, ...). We chose to use rain water, except for the bacterial tests, since the material will be frequently exposed to this kind of water. For the bacterial tests, we chose ultrapure water in order to avoid any initial contamination.


The results obtained have been tested against the conditions mentioned in appendix 2.3.1 Vlare II (basic environmental quality standards for surface water).


**3.1. Chemical tests**

parameters (test code)	Unity	Ref. value <sup>(1)</sup>	Value	Value
<i>Your reference</i>			<i>Firestone UltraPly TPO 045</i>	<i>Rain water</i>
<i>Our reference</i>			2008030058	-
<i>Information</i>			<i>Elute with rain water</i>	<i>“Blank controls”</i>

Conductivity 25°C (SAP-003)	µS/cm	1000	67,6	67,1
Degree of acidity (SAP-004)	-	6,5 – 8,5	7,12	7,14
Hardness – total (SAP-026)	°FH	-	2,0	2,0
Metals (SAP-189)				
Iron (Fe)	µg/l	200	< 50	< 50
Manganese (Mn)	µg/l	200	< 15	< 15
Calcium (Ca)	mg/l	-	7,3	7,4
Magnesium (Mg)	mg/l	-	0,32	0,31
Anions IC (SAP-055)				
Nitrite IC	mg N/l	10	< 0,01	< 0,01
Nitrate IC	mg N/l		1,2	1,3

<sup>(1)</sup> appendix 2.3.1 Vlare II (basic environmental quality standards for surface water)

  
Hofman S.  
Quality manager

  
M. Vercruyse  
Managing director

*This report contains 3 pages*

*pag. 2*

*The above-mentioned results only concern the above-mentioned sample. Any partial reproduction of this analysis report is only allowed after a written permission of BECEWA. Further information about the analysis method (test code) can always be obtained on written demand..(B) : analysis under Beltest accreditation, \*.execution by third party.*

**CONTINUATION ANALYSIS REPORT 20090045**

**3..2. Bacterial tests**

parameters (test code)	Unity	Value	Value
<i>Your reference</i>		<i>Firestone UltraPly TPO 045</i>	<i>Ultrapure water</i>
<i>Our reference</i>		<i>2009030058</i>	-
<i>Information</i>		<i>Ultrapure water</i>	<i>"Blank controls"</i>

Bacteriology *			
Total bacterial count 22°C	CFU/ml	28	0
Total coliform bacteria	CFU/100ml	0	0
Escherichia Coli	CFU/100ml	0	0


**4. Evaluation**

- After being exposed to the sample "Firestone Ultraply TPO 045" the water complies with the basic environmental quality standards for surface water (appendix 2.3.1 Vlare II) and there is no abnormal germ growth. The water can be used for household use, e.g. washing machine, toilet, etc.

**5. Used analysis methods**

Test code	Technique – standard method
Conductivity 25°C (SAP-003)	Conductometric analysis, in accordance with WAC III A 004 and CMA 2/I/A.2
Degree of acidity (SAP-004)	Potentiometric analysis, in accordance with WAC III A 005 and CMA/2/I/A.1
Hardness – total (SAP-026)	Titrimetric analysis, method based on NBN 304
Metals (SAP-189)	ICP-OES, CMA/2/I/B1
Anions IC (SAP-055 L)	Ion chromatography, in accordance with WAC/III/C/001 and CMA/2/I/C.3.
Bacteriology *	Subcontracting

  
Hofman S.  
Quality manager

  
M. Vercruysse  
Managing director

*This report contains 3 pages*

*pag. 3*

*The above-mentioned results only concern the above-mentioned sample. Any partial reproduction of this analysis report is only allowed after a written permission of BECEWA. Further information about the analysis method (test code) can always be obtained on written demand..(B) : analysis under Beltest accreditation, \*:execution by third party.*