

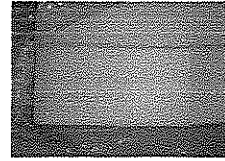
**FG 510.1 TIER 1 - TOILET BOWL & DRAINLINE CLEARANCE TEST**

Test conducted for Main Spa

Date : 18/04/2011

**Sample :**

Ref : Embossed Web Double S 55 FSC Mixed 70 %  
 Dimensions MD x CD : 200 mm x 105 mm  
 Additional reference: Multibonde Airlaid



**Procedure :**

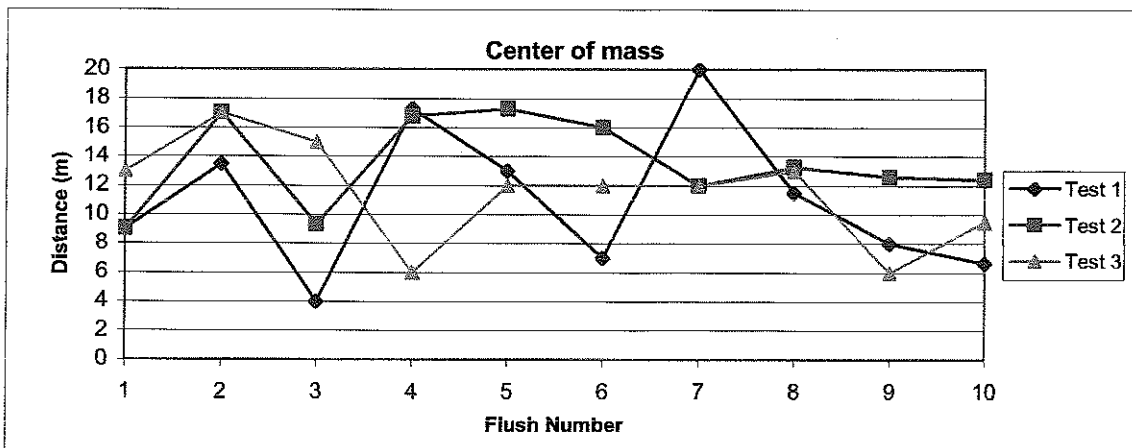
Toilet type :  Wash-down (Roca)      Pipe slope :  2%  
                    Siphon (Aspirambo)                       1.25%  
 Flush volume :  3 L                                Pipe diam :  100 mm  
                    4.5 L    80 mm  
                    9 L  
 Product :    Nb of articles par flush :  
                    Wipes     2 wipes  
                    Dry toilet paper                                        strip of  sheets  
                    Other:

**Loading protocol :** 10 consecutive flushes with product  
 Test repeated 3 times

**Results :**

Expressed in number of flushes and in % of the overall amount of flushes (30)

	Test 1	Test 2	Test 3	Mean (%)
Bowl and trap clearance on 1 flush	10	9	10	96.7
<b>Bowl and trap clearance on 2 flushes</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>100.0</b>
Clear 10m on 1 flush	5	5	7	56.7
<b>Clear 10m on 2 flushes</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>100.0</b>



**Response to acceptance criteria (\*) :**

Product clears toilet bowl and trap on 90% of flushes (Q1.1)	YES
Product clears 10 m on 2 flushes (Q1.2, 3.1a)	YES
Center of mass not showing downward trend for 5 consecutive flushes (Q1.2, 3.1a)	YES

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**FG 512.1 TIER 1 - COLUMN SETTLING TEST**

Test conducted for Main Spa

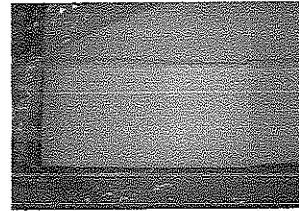
Date: 18/04/2011

**Sample:**

Ref : Embossed Web Double S 55 FSC Mixed 70 %

Dimensions MD x CD : 200 mm x 105 mm

Additional reference: Multibonde Airlaid



Test performed on whole product

**Procedure:**

20 cm diameter and 150 cm tall column

Room temperature: 24°C

**Results:**

	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8	Test 9	Test 10	Mean
<b>Necessity to add</b>											
1 liter after 5 min											
1 add. litre after 30 min											
1 add. litre after 1 hour											
1 add. litre after 2 hours											
1 add. litre after 23 hours											
<b>If product settles :</b>	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8	Test 9	Test 10	Mean
Time to settle 100 cm (in s)	80	87	77	20	75	110	69	95	108	56	77.7
Settling rate (cm/second)	1.25	1.15	1.30	5.00	1.33	0.91	1.45	1.05	0.93	1.79	2.01

**Response to acceptance criteria (\*):**

Product settles to bottom of column in 24 h: YES	Q1.3 : YES
Product settles > 0.1 cm/s : YES	Q2.1, 2.3, 3.5 : YES
Product settles > 2 cm/s : YES	Q3.3 : YES

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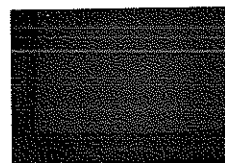
**FG 522.2 TIER 2 - SLOSH BOX DISINTEGRATION TEST**

Test conducted for Main Spa

Date : 15/04/2011

**Sample :**

Ref : Embossed Web Double S 55 FSC Mixed 70%  
Dimensions MD x CD : 200 mm x 105 mm  
Additional reference: Multibonde Airlaid



**Procedure :**

68 mm rocking table, 26 rpm, 9L box containing 2L of tap water at room temperature  
Room temperature : 24°C  
Number of articles per box: 1

**Results :**

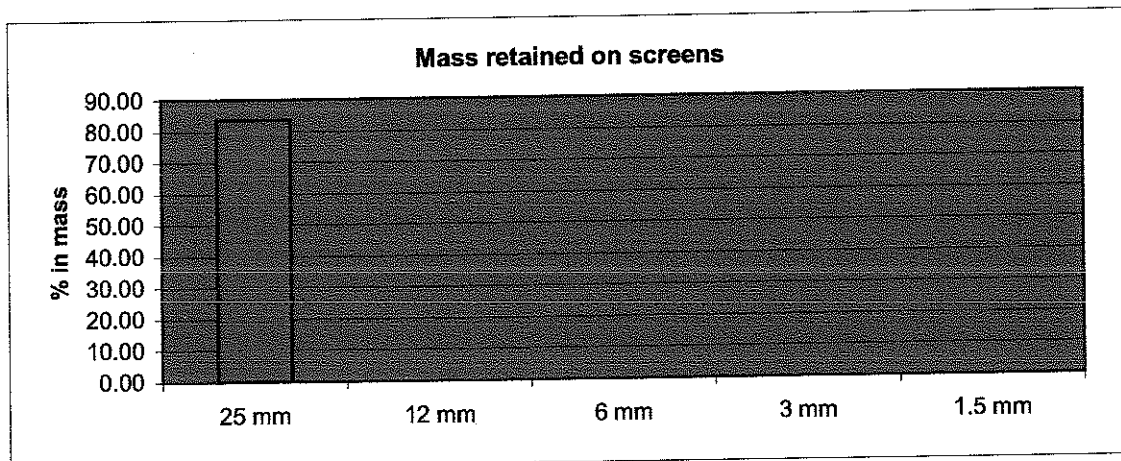
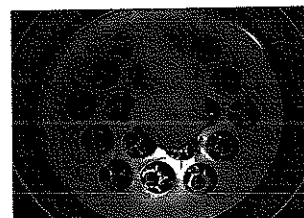
Dry weight (per article) : 1.22 g

Oven temperature 105°C

**After 6 hours**

Expressed in % in mass retained on the screen

Hole diameter of the screen	Flask 1	Flask 2	Flask 3	Mean (%)
25 mm	85.84	81.00	83.57	83.47
12 mm	0.00	0.00	0.00	0.00
6 mm	0.00	0.00	0.00	0.00
3 mm	0.00	0.00	0.00	0.00
1.5 mm	0.00	0.00	0.00	0.00



**Response to acceptance criteria (\*) :**

Passes through screen 25 mm after 6 hours :	16.53 %	Q1.3, 3.1b : NO
Retained on screen 12 mm after 6 hours :	83.47 %	Q3.2a : NO
Passes through screen 3 mm after 6 hours :	16.53 %	Q3.2b : NO
Passes through screen 1.5 mm after 6 hours :	16.53 %	Q4.1 : NO

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**FG 521.1 TIER 2 - LABORATORY HOUSEHOLD PUMP TEST**

Test conducted for MAIN SPA

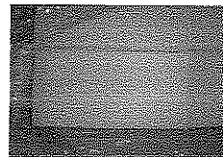
Date: 09/05/2011

Sample:

Ref : Embossed Web Double S 55 FSC Mixed 70 %

Dimensions MD x CD : 200 mm x 105 mm

Additional reference: Multibonded Airlaid



Procedure:

Pump: Sanitson SVO 205-0.75 M - Vortex, 7 pales- 28 m3/h - 7 m

Check valve: mechanical - Level detection: float switch

Outlet pipe: 50 mm diam, 2.4 m vertical, 2.4 m horizontal slope 2%

Activation frequency: every 5 flushes

Flush volume: 6l

Number of articles per flush: 2

Room temperature : 25°C

Results:

**7-day equivalent:**

Pump clogging during the test (YES/NO): NO

Amount of product in pump basin at the end of test run: 36 WIPES

Amount of product in pump, check valve and drainline: 9 WIPES IN PUMP CHAMBER

Observation of product in collection basin: ENTIRE WIPES

28 days equivalent test necessary (YES/NO): YES

**28-day equivalent:**

Pump clogging during the test (YES/NO): NO

Amount of product in pump basin at the end of test run: 35 WIPES

Amount of product in pump, check valve and drainline: NO

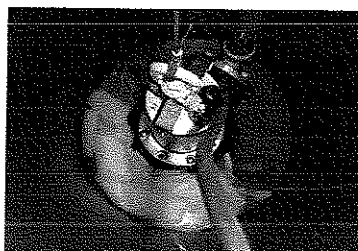
Response to acceptance criteria (\*) :

<b>7-day equivalent</b>		
Blockage in the pump	NO	
Residual material in pump chamber / check valve	NO	
More than 3 flush load in pump basin	YES	<b>Q1.3, 3.1b: NO</b>
<b>28-day equivalent</b>		
Blockage in the pump	NO	
Additional accumulation in pump chamber / valve	NO	
Additional accumulation in pump basin	NO	

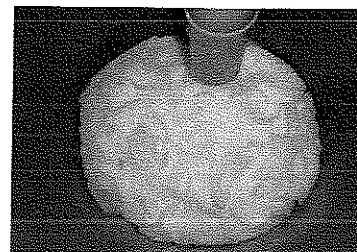
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Wipes in pump basin at  
the end of the 7 day test



Wipes in pump basin at  
the end of the 28 day test



Wipes (entire) in collection  
sieve

### FG 513.1 TIER 1 - AEROBIC BIODISINTEGRATION TEST

Test conducted for Main Spa

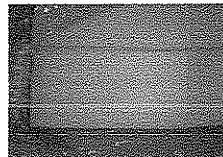
Date : 22/06/2011 to 21/07/2011

#### Sample :

Ref : Embossed Web Double S 55 FSC Mixed 70%

Dimensions: 200 mm x 105 mm

Additional reference: Multibonded Airlaid



#### Procedure :

5cm orbital shaker, 100 rpm, 2.8L flask containing 1L of aerobic activated sludge

Sludge issued from Montbonnot municipal wastewater treatment plant

Incubation time: 28 days

Room temperature: 23°C

Number of articles per flask: 1

Positive control: Natracare Tampon, 100% organic cotton

Sampling times: 14 days and 28 days

#### Results :

Dry weight: 1.20 g

Percentage of product disintegration (expressed in percent mass loss):

Sample	After 14 days	After 28 days
Positive control in activated sludge	71.61	97.38
Product in activated sludge (flask 1)	73.89	76.11
Product in activated sludge (flask 2)	74.43	74.07
Product in activated sludge (flask 3)	73.19	77.22
<b>Product in activated sludge (mean)</b>	<b>73.84</b>	<b>75.80</b>

Percentage of product disintegration (expressed in percent mass loss / positive control):

Sample	After 14 days	After 28 days
Positive control in activated sludge	100.00	100.00
Product in activated sludge (flask 1)	100.00	78.16
Product in activated sludge (flask 2)	100.00	76.06
Product in activated sludge (flask 3)	100.00	79.31
<b>Product in activated sludge (mean)</b>	<b>100.00</b>	<b>77.84</b>

#### Response to acceptance criteria (\*) :

Passes through 1mm sieve after 28 days:	77.84 %
<b>Q2.2a, 2.4, 3.5, 3.6, 3.7, 4.2 : NO</b>	

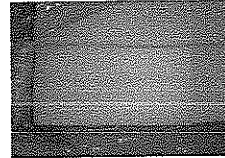
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Second Edition - July 2009, published by EDANA / INDA

### FG 514.1 TIER 1 - ANAEROBIC BIODISINTEGRATION TEST

Test conducted for Main Spa  
Date : 22/06/2011 to 21/07/2011

#### Sample :

Ref : Embossed Web Double S 55 FSC Mixed 70%  
Dimensions: 200 mm x 105 mm  
Additional reference: Multibonded Airlaid



#### Procedure :

2 L amber glass bottle containing 1 L of anaerobic sludge  
Sludge issued from Montbonnot municipal wastewater treatment plant  
Incubation time: 28 days  
Temperature for anaerobic disintegration: 25°C  
Number of articles per bottle: 1  
Positive control: Natracare Tampon, 100% organic cotton  
Sampling times: 14 days and 28 days

#### Results :

Dry weight: 1.20 g

Percentage of product disintegration (expressed in percent mass loss):

Sample	After 14 days	After 28 days
Positive control in activated sludge	41.99	88.82
Product in activated sludge (flask 1)	54.16	70.95
Product in activated sludge (flask 2)	50.00	68.41
Product in activated sludge (flask 3)	59.11	71.00
<b>Product in activated sludge (mean)</b>	<b>54.42</b>	<b>70.12</b>

Percentage of product disintegration (expressed in percent mass loss / positive control):

Sample	After 14 days	After 28 days
Positive control in activated sludge	100.00	100.00
Product in activated sludge (flask 1)	100.00	79.88
Product in activated sludge (flask 2)	100.00	77.02
Product in activated sludge (flask 3)	100.00	79.94
<b>Product in activated sludge (mean)</b>	<b>100.00</b>	<b>78.95</b>

#### Response to acceptance criteria (\*) :

Passes through 1mm sieve after 28 days:	78.95 %
Q2.2a, 2.4, 3.5, 3.6, 3.7, 4.2 : NO	

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