

STUDY REPORT nr° 18.0876/1 EN

SUBJECT: Flushability Test FG502

SAMPLE(S)

Designation(s):

- Wesclean

The above samples designation, also mentioned in this report, comes from information provided by the customer. It is not the responsibility of the CTP.

Samples have been taken and dispatched by the customer.

The remains of samples are kept during 3 months at least.

ORDER

V/ Re : Your acceptance by e-mail dated on 29/08/2018

Customer : Caihong LIU

Company : HANGZHOU WESTON MANUFACTURING CO., LTD.
NO.399, HUANBEI ROAD, LINAN CITY,
HANGZHOU, ZHEJIANG,
CHINA

TESTS

Business Unit : Materials Performance - Flushability

Responsible for the tests: Laurence LEROY

Visa

Timetable : Tests performed on week 34, 2018



The copy of this report is authorised in the uncut version only.
This report is made of 6 pages (including cover) and 4 appendices.

Results are valid only for the samples considered.

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1 INTRODUCTION

The objective of this study is to evaluate a product according to test method FG502 described in the Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Fourth Edition, May 2018.

This document is published by the nonwovens and related industries associations, INDA in the US and EDANA in Europe, as industry guidelines for assessing the flushability of disposable nonwoven products.

2 MATERIAL REFERENCE

The following product has been tested:

- Wesclean

3 TESTING METHODS

A summary description of the test is given below.
Additional technical information is reported on the summary sheet result.

- **FG 502: SLOSH BOX DISINTEGRATION TEST**

The purpose of the test is to assess the potential for a product to disintegrate when it is subjected to mechanical agitation in water or wastewater.

The product is placed in an oscillating box containing 2.0 liters of tap water. After 60 minutes of oscillation, the contents of the box are passed through a 12.5 mm perforated plate sieve, recovered and analyzed gravimetrically.

6 replicates are performed.

4 RESULTS AND COMMENTS

Detailed sheet result is given in Appendix.
Additional comments are given hereafter.

4.1 FG502.R1(18): SLOSH BOX DISINTEGRATION TEST

Results:

Percentage of material passing through the 12.5 mm sieve after 60 minutes:

After 60 min	REPL 1	REPL 2	REPL 3	REPL 4	REPL 5	REPL 6
RETAINED						
<i>Dry mass (g)</i>	0.1355	0.1232	0.1332	0.1016	0.1391	0.1080
% mass	5.4%	4.9%	5.3%	4.0%	5.5%	4.3%
PASSED THROUGH						
% mass	94.6%	95.1%	94.7%	96.0%	94.5%	95.7%

The material is in the form of fibres at the end of the test. 95.1% of the material is passing through the 12.5 mm sieve after 60 minutes of agitation in water.

The percentage of the replicate articles tested for which the percentage of the article's initial dry mass passes through the 12.5 mm sieve after 60 minutes is greater than 60% is 100%.



Product after 60 min of agitation in slosh box

Acceptance criteria (*):

<ul style="list-style-type: none"> The percent of the starting dry mass passing through the 12.5mm perforated plate sieve after 60 minutes must be greater than 60% for at least 80% of the individual replicates tested. 	PASSED
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(*) Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Fourth Edition, May 2018

Comments:

The product disintegrates into fibres and small pieces after 60 minutes of agitation.

5 CONCLUSION

The product Wesclean has been tested according to test method FG502.R1(18) described in the Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Fourth Edition, May 2018.

- Results to *FG502.R1(18): Slosh Box Disintegration Test* show that the GD4 acceptance criteria is fulfilled for the product Wesclean and that this product has the potential to disintegrate in water.

The manufacturer has declared that the product Wesclean was the same product as the product tested by CTP in October 2015 and assessed as flushable according to the Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Third Edition, June 2013.

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- Additionally, results to *FG507: Municipal Sewage Pump Test* show that the GD4 acceptance criteria is fulfilled for the product Wesclean with an average percent power increase not exceeding 5%.

Consequently, Wesclean is qualified to support a flushable claim according to Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Fourth Edition, May 2018.

APPENDICES

The following documents are enclosed:

- Summary sheet result FG502.R1(18)
 - Summary sheet result FG507
 - Self-declaration of unicity of product
 - Attestation of flushability
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FG502.R1(18): SLOSH BOX DISINTEGRATION TEST

Test conducted at CTP Grenoble, France for HANGZHOU WESTON MANUFACTURING CO., LTD.

Date of the test : August 23, 2018

Sample:

WESCLEAN
Dimensions: 200 mm x 250 mm
Additional ref: none



Equipment setup and test protocol:

68 mm oscillating table, 26 rpm, 3 boxes
9L rectangular box containing 2L of tap water at room temperature
Room temperature: 24.0°C
Number of articles per box: 1
Number of replicates: 6
Sieve: 12.5 mm perforated plate sieve

Results:

Drying procedure: 24h at 103°C Pre-rinsing procedure: non pre-rinsing (dry material)
Starting dry mass: 2.5116 g (SD: 0.0208 g)

After 60 min	REPL 1	REPL 2	REPL 3	REPL 4	REPL 5	REPL 6
RETAINED						
Dry mass (g)	0.1355	0.1232	0.1332	0.1016	0.1391	0.1080
% mass	5.4%	4.9%	5.3%	4.0%	5.5%	4.3%
PASSED THROUGH						
% mass	94.6%	95.1%	94.7%	96.0%	94.5%	95.7%

% of the individual replicates tested for which the percent of the starting dry mass passing through the 12.5 mm perforated sieve after 60 min is greater than 60%: **100%**

Photographs:

Product in the slosh box after:

3 min



10 min



5 min



60 min



Product retained on the 12.5 mm sieve



Acceptance criteria (*):

The percent of the starting dry mass passing through the 12.5mm perforated plate sieve after 60 minutes must be greater than 60% for at least 80% of the individual replicates tested.

PASSED

(*) Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Fourth Edition, May 2018

**FG507 - MUNICIPAL SEWAGE PUMP TEST
FOR THE NEDERLANDS**

Test conducted at CTP Grenoble, France for HANGZHOU WESTON MANUFACTURING CO., LTD.
Date of the test : September 29, 2015

Sample:

Wesclean
Dimensions: 150 mm x 200 mm
Additional ref: None



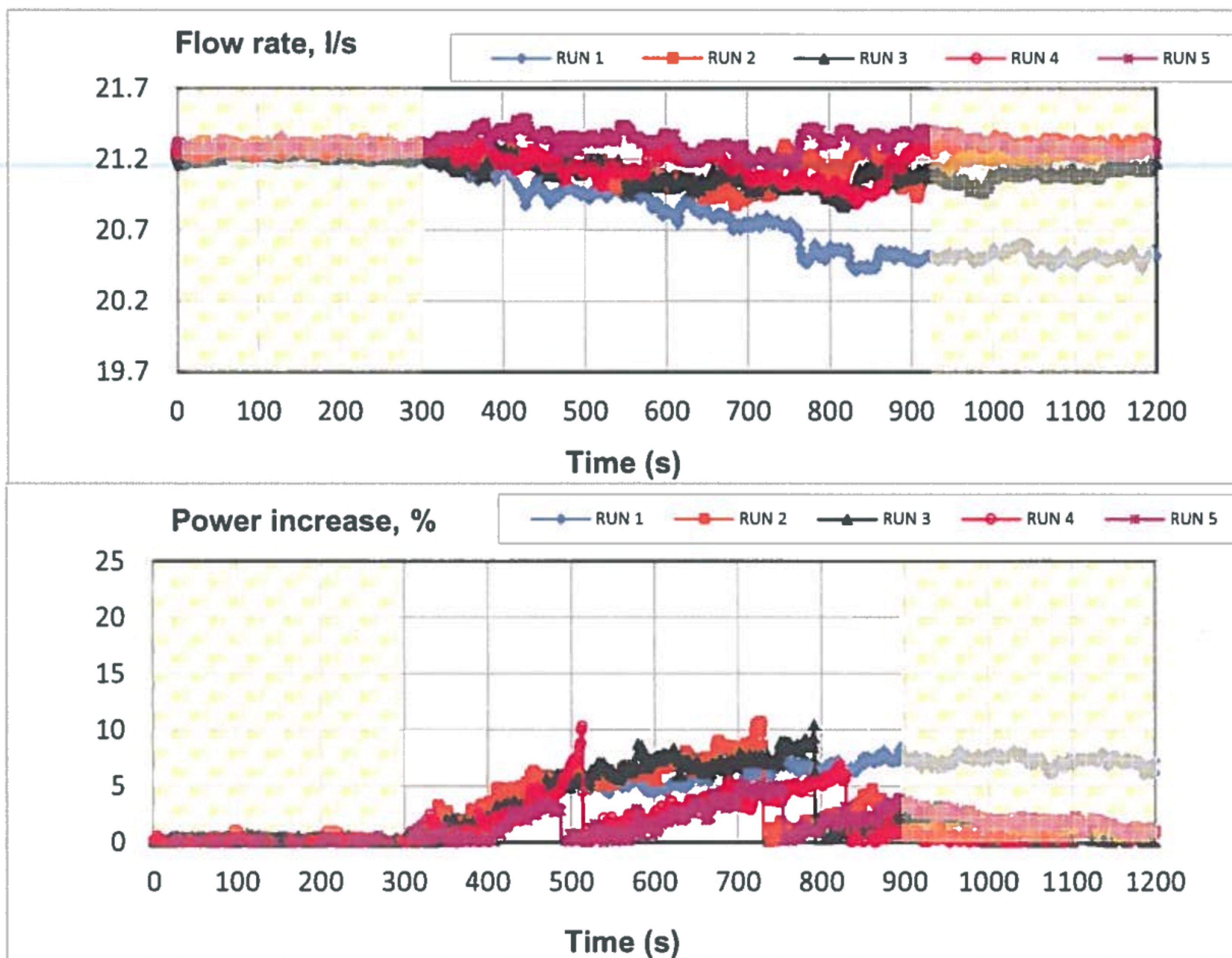
Equipment setup and test protocol:

Pump device: ITT Flygt pump model C-3085.183
Flow rate at test start: 100% BEP - (21,3 +/- 0,2) l/s
Water temperature at the beginning of the test: 18.5°C
Water temperature at the end of the test: 20.3°C

Number of replicates: 5
Soaking time: 1 hour

Results:

Baseline average power at start: 2.41 kW



% of the individual data points exceeding a 10% power increase over the baseline	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5	Mean
		0.00	1.17	0.17	0.17	0.00

Photographs:

Material found in the pump at the end of test



Material found on the screen at the end of test



Acceptance criteria (*):

No more than 10% of the individual data points recorded during the 5 runs can exceed a 10% power increase over the baseline

PASSED

(*) Guidelines for Assessing the Flushability of Disposable Nonwoven Products, Third Edition, June 2013