

**Job No./Report No: 20-005248**

**Date: 26/06/2020**

**Client:** Textil Manly SA

**Code:** CL-0838

**Address:** C/ Garbí, 18 Nave 6 Dcha. Pol. Ind. Can Volart Parets del Vallés Barcelona ESPAÑA

**Tel:** 0034 933118800

The following sample was (were) submitted and identified by the client as:

Serie :	Job no Report No.: <b>20-005248</b>
Batch No.:	Receiving Date: <b>01/06/2020</b>
Reference No.: <b>TEJIDO ART. TEC 7191 MULTICOLOR</b>	Test Start Date: <b>03/06/2020</b>
Composition indicated: <b>80%PES,20%PA</b>	Test End Date: <b>26/06/2020</b>
	Sample description: <b>RAW MATERIAL MASKS</b>

### SUMMARY OF TEST CONCLUSIONS

SOP description	Conclusions
SOP305 - Change of appearance after washing (Garments and fabrics)	See Results
SOP 342- Bacterial Filtration Efficiency (BFE) - After Washing	See Results
SOP106 - Determination of breathability (Differential Pressure) - After Washing	See Results

### Sample Tested



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## SOP305 - Change of appearance after washing (Garments and fabrics)

ID	ID AMSLab	Description	Conclusion
2	S-200603-00013	FABRIC MULTICOLOR (20 WASHING CYCLES AT 60°C)	See Results
5	S-200617-00018	FABRIC MULTICOLOR (50 WASHING CYCLES AT 60°C)	See Results
8	S-200619-00140	FABRIC MULTICOLOR (25 WASHING CYCLES AT 60°C)	See Results

	CAS	S-200603-00013	S-200617-00018	S-200619-00140
Change of appearance after washing		No change	Slight change	Slight change
Number of cycles		20	50	25
Washing Temperature		60°C	60°C	60°C

**Notes:**

Note 1: Washing and drying process applied based on UNE-EN ISO 6330:2012

**Note 2:**

- Detergent: 20 gr of Commercial detergent / - Drying procedure: Air dry without tumble dry.
- n.a.: not applicable
- Requirement: No obvious change/colour/shape/appearance/seams/embroidery/trimmings/applications

**Note 3 - Meaning of the grades of change of appearance:**

- No change in appearance after washing and drying process
- Slight change in appearance after washing and drying process
- Moderate change in appearance after washing and drying process
- Severe change in appearance after washing and drying process

## SOP 342- Bacterial Filtration Efficiency (BFE) - After Washing

ID	ID AMSLab	Description	Conclusion
3	S-200603-00014	FABRIC MULTICOLOR (AFTER 20 WASHING CYCLES AT 60°C)	See Results
6	S-200617-00019	FABRIC MULTICOLOR (AFTER 50 WASHING CYCLES AT 60°C)	See Results
9	S-200619-00141	FABRIC MULTICOLOR (AFTER 25 WASHING CYCLES AT 60°C)	See Results

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	CAS	S-200603-00014	S-200617-00019	S-200619-00141
Test 1: Bacterial Filtration Efficiency		84.6	80.6	82.1
Test 1: Number of Bacteria		320	410	380
Test 2: Bacterial Filtration Efficiency		84.6	79.9	82.4
Test 2: Number of Bacteria		326	425	374
Test 3: Bacterial Filtration Efficiency		84.5	79.6	82.7
Test 3: Number of Bacteria		329	435	366
Test 4: Bacterial Filtration Efficiency		84.7	79.8	83.1
Test 4: Number of Bacteria		325	429	358
Test 5: Bacterial Filtration Efficiency		85.0	79.4	83.3
Test 5: Number of Bacteria		318	436	354

**Notes:**

Test Metod Ref: TS EN 14683:2019 Medical Face Masks, Requirements and Test Methods

**Specifications applied:**

Spanish specification UNE 0065:2020:  $\geq 90\%$

European specification CWA 17553:2020: Level  $\geq 90\%$  and Level  $\geq 70\%$

Report unit Bacterial Filtration Efficiency = %

Report unit Number of Bacteria = cfu/mL

A specimen of the mask material is clamped between a impactor and an aerosol chamber. An aerosol of Staphylococcus aureus is introduced into the aerosol chamber and drawn through the mask material and the impactor under vacuum. The bacterial filtration efficiency of the mask is given by the number of colony forming units passing through the medical face mask material expressed as a percentage of the number of colony forming units present in the challenge aerosol.

Test Flow Rate: 28,3 L/min

Test Flow Time: 2 minute

Sample Sizes: 10x10 cm<sup>2</sup>

Microorganism: Staphylococcus aureus ATCC 6538

Bacterial concentration (cfu/ml) : 5x10<sup>5</sup> cfu/ml

Incubation conditions: 24 hour, 35C  $\pm$  2C

Positive control sample average of number of Bacteria (C): 2.12x10<sup>3</sup> cfu/ml

(\*) Test subcontracted. Results in subcontracted report number: 20018267

## **SOP106 - Determination of breathability (Differential Pressure) - After Washing**

ID	ID AMSLab	Description	Conclusion
1	S-200603-00012	FABRIC MULTICOLOR (AFTER 20 WASHING CYCLES AT 60°C)	See Results
4	S-200617-00017	FABRIC MULTICOLOR (AFTER 50 WASHING CYCLES AT 60°C)	See Results
7	S-200619-00139	FABRIC MULTICOLOR (AFTER 25 WASHING CYCLES AT 60°C)	See Results

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	CAS	S-200603-00012	S-200617-00017	S-200619-00139
Average Differential pressure (Pa/cm2)		16	13	14
Value 1 Differential pressure (Pa/cm2)		16	13	14
Value 2 Differential pressure (Pa/cm2)		16	12	14
Value 3 Differential pressure (Pa/cm2)		17	12	13
Value 4 Differential pressure (Pa/cm2)		16	13	13
Value 5 Differential pressure (Pa/cm2)		17	13	15

**Notes:**

Note 1: Applied standard UNE-EN 14683:2019 and Specification UNE 0064-1, 0064-2 and 0065

Note 2: Size of test specimen: 4.9 cm<sup>2</sup>

Note 3: Tested area of the test specimen: 2.5 cm

Note 4: Flow of air: (8 ± 0.2) l/min

Note 5: Velocity of 272 l/m<sup>2</sup>/s or 272 mm/s

Note 6: Report Unit: Pa and P (Pa/cm<sup>2</sup>)

Note 7: Number of measurements: 5

Note 8: Conditioned samples: 4 hours at 21 ± 5 °C and 85 ± 5 HR

Note 9: n.a. = not applicable

**Requirement by standard:**

- Non-reusable Hygienic Mask by UNE 0064-1-2: ≤ 60 Pa/cm<sup>2</sup>
- Reusable Hygienic Mask by UNE 0065: ≤ 60 Pa/cm<sup>2</sup>
- European specification CWA 17553:2020: ≤ 70 Pa/cm<sup>2</sup>

**Specific Notes:**

(\*\*) The result is out of specifications

Issue Date: 26/06/2020

Signed: Manuel Lolo



General Manager

Signed: Pablo Perez



Chemical Lab Manager

Signed: Esteban Ramirez



Physical Lab Manager

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