TEST REPORT

Job No./Report No: 20-005095
Date: **17/06/2020**

Client: Tejidos Peñatex, S.L. **Code:** CL-1305
Address: Batista i Roca,63,1-21 MATARÓ BARCELONA ESPAÑA
Attn: Javier Peña Jimenez **e-MAIL:** penyatex@telefonica.net
Tel: 0034 937578273 **Fax:**

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

Serie :	
Batch No.:	
Reference No.:	**TEJIDO SUBLIMADO FULL PRINT AZUL-ROJO 5168 NEOPRENO**
Composition indicated:	**92% PES, 8%EA**

Job no Report No.:	**20-005095**
Receiving Date:	**28/05/2020**
Test Start Date:	**05/06/2020**
Test End Date:	**17/06/2020**
Sample description:	**RAW MATERIAL MASKS**

SUMMARY OF TEST CONCLUSIONS

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

Sample Tested

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

ID	ID AMSLab	Description	Conclusion
3	S-200529-00016	FABRIC MULTICOLOR (5 WASHING CYCLES AT 60ºC)	Pass

	CAS	S-200529-00016
Change of appearance after washing		No change
Number of cycles		5
Washing Temperature		60ºC

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)

ID	ID AMSLab	Description	Conclusion
4	S-200529-00017	FABRIC MULTICOLOR (ORIGINAL)	Pass

	CAS	S-200529-00017
Test 1: Bacterial Filtration Efficiency		91.4
Test 1: Number of Bacteria		241
Test 2: Bacterial Filtration Efficiency		91.4
Test 2: Number of Bacteria		240
Test 3: Bacterial Filtration Efficiency		91.6
Test 3: Number of Bacteria		235
Test 4: Bacterial Filtration Efficiency		91.8
Test 4: Number of Bacteria		231
Test 5: Bacterial Filtration Efficiency		91.8
Test 5: Number of Bacteria		230

Notes:

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

Specifications:
- UNE 0065: > 90%

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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 cm2
Microorganism:Staphylococcus aureus ATCC 6538
Bacterial concentration (cfu/ml) :5x10E5 cfu/ml
Incubation conditions: 24 hour, 35C ± 2C
Positive control sample average of number of Bacteria (C): 2.8x10E3 cfu/ml

(*) Test subcontracted. Results in subcontracted report number: 20017783

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

ID	ID AMSLab	Description	Conclusion
5	S-200529-00018	FABRIC MULTICOLOR (AFTER 5 WASHING CYCLES AT 60ºC)	Pass

	CAS	S-200529-00018
Test 1: Bacterial Filtration Efficiency		90.9
Test 1: Number of Bacteria		255
Test 2: Bacterial Filtration Efficiency		90.6
Test 2: Number of Bacteria		262
Test 3: Bacterial Filtration Efficiency		90.3
Test 3: Number of Bacteria		271
Test 4: Bacterial Filtration Efficiency		90.4
Test 4: Number of Bacteria		270
Test 5: Bacterial Filtration Efficiency		90.1
Test 5: Number of Bacteria		278

Notes:

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

Specifications:
- UNE 0065: > 90%

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 cm2

Job No./Report No: 20-005095
Date: **17/06/2020**

Microorganism:Staphylococcus aureus ATCC 6538
Bacterial concentration (cfu/ml) :5x10E5 cfu/ml
Incubation conditions: 24 hour, 35C ± 2C
Positive control sample average of number of Bacteria (C): 2.8x10E3 cfu/ml

(*) Test subcontracted. Results in subcontracted report number: 20017784

SOP106 - Determination of breathability (Differential Pressure) - Original

ID	ID AMSLab	Description	Conclusion
1	S-200529-00014	FABRIC MULTICOLOR (ORIGINAL)	Pass

	CAS	S-200529-00014
Average Differential pressure (Pa/cm2)		32
Value 1 Differential pressure (Pa/cm2)		31
Value 2 Differential pressure (Pa/cm2)		31
Value 3 Differential pressure (Pa/cm2)		32
Value 4 Differential pressure (Pa/cm2)		33
Value 5 Differential pressure (Pa/cm2)		33

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 cm2
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/m2/s or 272 mm/s
Note 6: Report Unit: Pa and P (Pa/cm2)
Note 7: Number of samples tested: 5 / Number of measurements: 5
Note 8: Conditioned samples: 4 hours at 21 ± 5 ºC and 85 ± 5 HR
Note 9: n.a. = not applicable

Requirement by standard:
- Surgical Mask type I by UNE-EN 14683: < 40 Pa/cm2
- Surgical Mask type II by UNE-EN 14683: < 40 Pa/cm2
- Surgical Mask type IIR by UNE-EN 14683: < 60 Pa/cm2
- Non-reusable Hygienic Mask by UNE 0064-1-2: < 60 Pa/cm2
- Reusable Hygienic Mask by UNE 0065: < 60 Pa/cm2

Specific Notes:
(**) The result is out of specifications

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

ID	ID AMSLab	Description	Conclusion
2	S-200529-00015	FABRIC MULTICOLOR (AFTER 5 WASHING CYCLES AT 60ºC)	Pass

	CAS	S-200529-00015
Average Differential pressure (Pa/cm2)		37
Value 1 Differential pressure (Pa/cm2)		35
Value 2 Differential pressure (Pa/cm2)		38
Value 3 Differential pressure (Pa/cm2)		39

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	CAS	S-200529-00015
Value 4 Differential pressure (Pa/cm2)		36
Value 5 Differential pressure (Pa/cm2)		36

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 cm2
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/m2/s or 272 mm/s
Note 6: Report Unit: Pa and P (Pa/cm2)
Note 7: Number of samples tested: 5 / Number of measurements: 5
Note 8: Conditioned samples: 4 hours at 21 ± 5 ºC and 85 ± 5 HR
Note 9: n.a. = not applicable

Requirement by standard:
- Non-reusable Hygienic Mask by UNE 0064-1-2: < 60 Pa/cm2
- Reusable Hygienic Mask by UNE 0065: < 60 Pa/cm2

Specific Notes:
(**) The result is out of specifications

Issue Date: 17/06/2020

Signed: Manuel Lolo	Signed: Pablo Perez	Signed: Esteban Ramirez
General Manager	Chemical Lab Manager	Physical Lab Manager

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