

Job No./Report No: 20-012758

Date: 13/12/2020

Client: Elisabeth Boix Castañer

Code: CL-1535

Address: C/Pare Sellarés, 139 SABADELL BARCELONA ESPAÑA

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

Job no Report No.: 20-012758
Receiving Date: 27/11/2020
Test Start Date:
Test End Date: 13/12/2020
Sample description: RAW MATERIAL (MASK)

Serie :

Batch No.:

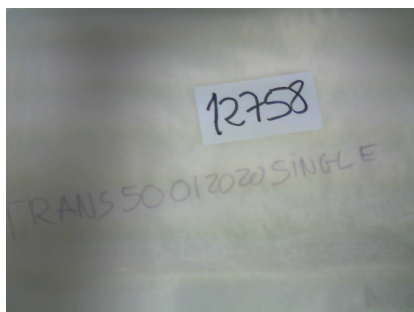
Reference No.: **VISIBLEMASK/TRANS 50 01 2020 SINGLE**

Composition indicated: **100% polyamide**

SUMMARY OF TEST CONCLUSIONS

SOP description	Conclusions
SOP305 - Change of appearance after washing (Garments and fabrics)	Pass
SOP 342- Bacterial Filtration Efficiency (BFE)	See Results
SOP 342- Bacterial Filtration Efficiency (BFE) - After Washing	See Results
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
4	S-201127-00134	FABRIC MASK ECRU - 1 LAYER - AFTER 5 WASHING CYCLES AT 60°C	Pass

	CAS	S-201127-00134
Change of appearance after washing		No change
Number of cycles		5
Washing Temperature		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)

ID	ID AMSLab	Description	Conclusion
2	S-201127-00132	FABRIC MASK ECRU - 1 LAYER - ORIGINAL	See Results

	CAS	S-201127-00132
Test 1: Bacterial Filtration Efficiency		87.4
Test 1: Number of Bacteria		245
Test 2: Bacterial Filtration Efficiency		86.3
Test 2: Number of Bacteria		266
Test 3: Bacterial Filtration Efficiency		85.7
Test 3: Number of Bacteria		278
Test 4: Bacterial Filtration Efficiency		85.5
Test 4: Number of Bacteria		281
Test 5: Bacterial Filtration Efficiency		85.1
Test 5: Number of Bacteria		289

Notes:

Test Method: EN 14683:2019+AC:2019 (TS EN 14683+AC:2019) Annex-B / Medical Face Masks - Requirements and Test Methods

Requirements by specifications:

Spanish specification UNE 0064:2020: >=95%

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Spanish specification UNE 0065:2020: $\geq 90\%$
 European specification CWA 17553:2020: Level $\geq 90\%$ and
 European specification CWA 17553:2020: Level $\geq 70\%$

Other requirements:

- Surgical Mask type I by UNE-EN 14683: $\geq 95\%$
- Surgical Mask type II by UNE-EN 14683: $\geq 98\%$
- Surgical Mask type IIR by UNE-EN 14683: $\geq 98\%$

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 \pm 2C
 Positive control sample average of number of Bacteria (C): 1.94x10E3 cfu/ml

(*) Test subcontracted and accredited for medical mask tests (EN 14683). Results in subcontracted report number: 20045820

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

ID	ID AMSLab	Description	Conclusion
5	S-201127-00135	FABRIC MASK ECRU - 1 LAYER - AFTER 5 WASHING CYCLES AT 60°C	See Results

	CAS	S-201127-00135
Test 1: Bacterial Filtration Efficiency		84.7
Test 1: Number of Bacteria		297
Test 2: Bacterial Filtration Efficiency		84.5
Test 2: Number of Bacteria		301
Test 3: Bacterial Filtration Efficiency		85.5
Test 3: Number of Bacteria		284
Test 4: Bacterial Filtration Efficiency		85.5
Test 4: Number of Bacteria		281
Test 5: Bacterial Filtration Efficiency		84.9
Test 5: Number of Bacteria		293

Notes:

Test Method: EN 14683:2019+AC:2019 (TS EN 14683+AC:2019) Annex-B / Medical Face Masks - Requirements and Test Methods

Requirements by specifications:

Spanish specification UNE 0064:2020: $\geq 95\%$
 Spanish specification UNE 0065:2020: $\geq 90\%$
 European specification CWA 17553:2020: Level $\geq 90\%$ and
 European specification CWA 17553:2020: Level $\geq 70\%$

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Other requirements:

- Surgical Mask type I by UNE-EN 14683: $\geq 95\%$
- Surgical Mask type II by UNE-EN 14683: $\geq 98\%$
- Surgical Mask type IIR by UNE-EN 14683: $\geq 98\%$

Report unit Bacterial Filtration Efficiency = %

Report unit Number of Bacteria = cfu/mL

A specimen of the mask material is clamped between an 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 \pm 2C

Positive control sample average of number of Bacteria (C): 1.94x10E3 cfu/ml

(*) Test subcontracted and accredited for medical mask tests (EN 14683). Results in subcontracted report number: 20045822

SOP106 - Determination of breathability (Differential Pressure) - Original

ID	ID AMSLab	Description	Conclusion
1	S-201127-00131	FABRIC MASK ECRU - 1 LAYER - ORIGINAL	Pass

	CAS	S-201127-00131
Average Differential pressure (Pa/cm ²)		41
Value 1 Differential pressure (Pa/cm ²)		40
Value 2 Differential pressure (Pa/cm ²)		42
Value 3 Differential pressure (Pa/cm ²)		42
Value 4 Differential pressure (Pa/cm ²)		41
Value 5 Differential pressure (Pa/cm ²)		40

Notes:

Note 1: Applied standard UNE-EN 14683:2019 and Spanish Specification UNE 0064-1, 0064-2, 0065 and European Specification CWA 17553

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 \pm 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 \pm 5 °C and 85 \pm 5 HR

Note 9: n.a. = not applicable

Requirements by specifications:

- Non-reusable Hygienic Mask by UNE 0064-1-2: < 60 Pa/cm²
- Reusable Hygienic Mask by UNE 0065: < 60 Pa/cm²
- European specification CWA 17553:2020: ≤ 70 Pa/cm²

Other requirements:

- Surgical Mask type I by UNE-EN 14683: < 40 Pa/cm²
- Surgical Mask type II by UNE-EN 14683: < 40 Pa/cm²

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- Surgical Mask type IIR by UNE-EN 14683: < 60 Pa/cm²

Specific Notes:

(**) The result is out of specifications

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

ID	ID AMSLab	Description	Conclusion
3	S-201127-00133	FABRIC MASK ECRU - 1 LAYER - AFTER 5 WASHING CYCLES AT 60°C	Pass

	CAS	S-201127-00133
Average Differential pressure (Pa/cm ²)		47
Value 1 Differential pressure (Pa/cm ²)		47
Value 2 Differential pressure (Pa/cm ²)		48
Value 3 Differential pressure (Pa/cm ²)		47
Value 4 Differential pressure (Pa/cm ²)		49
Value 5 Differential pressure (Pa/cm ²)		46

Notes:

Note 1: Applied standard UNE-EN 14683:2019 and Spanish Specification UNE 0064-1, 0064-2, 0065 and European Specification CWA 17553

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 °C and 85 ± 5 HR

Note 9: n.a. = not applicable

Requirements by specifications:

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

- Reusable Hygienic Mask by UNE 0065: < 60 Pa/cm²

- European specification CWA 17553:2020: <= 70 Pa/cm²

Other requirements:

- 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

Specific Notes:

(**) The result is out of specifications

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Issue Date: 13/12/2020

Signed: Manuel Lolo



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General Manager

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Chemical Lab Manager

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Physical Lab Manager

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