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CENTRO DE INVESTIGACION Y  
ASESORAMIENTO PARA LA LIMPIEZA, SL

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No. C-13760

XULAMASK, SL

C / ALCALDE JOSEP ABRIL, 24

1º LOCAL 2

08302 MATARO

(BARCELONA)

## TEST REPORT

TEST DATE

START:

09/22/2020

ENDING:

09/28/2020

### SAMPLE DESCRIPTION

Reusable hygienic masks with translucent fabric to facilitate lip reading provided by **XULAMASK, SL**

The samples provided of hygienic masks made by **XULAMASK, SL** located in C / Alcalde Josep Abril Nº 24, 1st local 2 of Mataró (Barcelona).

Our reference C-13760.

These are reusable hygienic masks with translucent fabric to facilitate lip reading.

The harness system that this mask incorporates does not make it difficult to put it on (it can be easily put on and taken off).

Masks of different sizes with identical gender and finish are presented for analysis, with which we unify the certificate, validating all sizes.

The masks analyzed comply with what is determined by the new European standard CWA 17553 and the UNE 0065/2020 specification, according to the tests carried out in this report.

From the tests enabled for these masks, it is clear:

- Aerosol filtration efficiency:> 96%.
- Particle filtration efficiency:> 95%.

Aerosol tests have been carried out in monodisperse and polydisperse characterized by a sufficient concentration of particles of  $(3 \pm 0.5) \mu\text{m}$

Tests carried out according to the UNE-EN 13274 standard.

Minimizing the projection of respiratory droplets containing saliva, sputum or respiratory secretions when the user speaks, coughs or sneezes, this mask limits the penetration of external respiratory droplets into the nasal and buccal area of the user.



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This facial mask is most effective when worn directly on bare skin.

Beards can reduce your filtration efficiency below specified limits.

**PHOTO OF THE SAMPLE:**



Subsequently, the following tests have been carried out:

- Determination of dimensional stability according to ISO 5077: 2008 standard. Result: It complies with what the regulations determine.

Guarantees protection against solid and liquid aerosols.

Comfort - adequate.

- Facial adjustment:> 95% (Adjustment to nose and mouth).
- This test has been carried out according to the average morphology of the population (they have been practiced on three test subjects with different morphologies).

The type of harnesses that this mask incorporates have been taken into account for this measurement.

It does not incorporate, as determined by the standard, any inhalation or exhalation valve.

Inhaled air enters the mask through the material and reaches the mouth and nose region directly. Exhaled air is discharged directly through the same pathway to the ambient atmosphere. Air permeability according to EN-ISO9237 standard.

The material that makes up this mask withstands handling and wear during its useful life, we advise following the washing programs indicated by the manufacturer.

The ability to absorb moisture prevents condensation from settling on the user.

It guarantees an adequate tightness against the ambient atmosphere.

Resistant to penetration with a water-repellent effect.

Latex / natural rubber has not been used in its manufacture.

Due to their gender and clothing, they can be considered reusable hygienic masks.

The washing tests carried out make it possible to exceed the number of 5 determined by the UNE-0065: 2020 specification, without altering any of the characteristics and results required by the standard of analytical tests reflected in this report. We refer to the washing report that accurately determines the number of attributable washes without affecting the useful life of the masks.

These masks are susceptible to sterilization in an ozone cabin, the tests determine that their original characteristics are not altered.

It also allows its disinfection through UV. Analyzes have been included for the efficacy of UV radiation as a disinfectant of viruses on a laboratory scale, including the SARS-CoV or MERS-CoV coronaviruses (1, 15-18).

Inoculation is carried out using methicillin-resistant Staphylococcus aureus (MRSA) and bacteriophages MS2 and Phi6; the latter is an enveloping RNA virus used as a surrogate for coronaviruses.

Result: Filtration of particles 0.3 microns in diameter and larger, equivalent to a filtration efficiency of at least 95%. Complies with current regulations for reusable hygienic mask.

Color fastness in standard washing procedure and described in separate report. Own washing program for masks used in health services. 4.8 (max 5).

The tests have been carried out in accordance with the UNE-EN ISO-105.

Peeling resistance.

The tests have been enabled simulating the areas of greatest friction of reusable hygienic masks for hygienic use. Outcome:

5 (max. 5). The protocols of the UNE-EN ISO 12945-2 standard have been followed.

Breathability, differential pressure whose result of the tests is:

<23 Pa / cm<sup>2</sup> approximately, taking as reference the standard UNE-EN14683: 2019 + AC: 2019 for a vacuum pressure of 100 Pa.

Tests described for a constant flow rate (95 l / min) according to EN 13274-3.

Results measured with Air Permeability Tester MinAir device.

The finish of the parts that are in contact with the wearer does not have edges or burrs that affect the dermis.

Nor does it incorporate staples or other elements that may constitute a danger or annoyance for the user.

It does not incorporate fluorocarbon finishes.

Skin compatibility: All areas that come into contact with the wearer's skin do not cause irritation or any adverse health effect.

The garment in use does not restrict blood flow.

The garment does not interfere with movements in use.

#### BIOCONTAMINATION CONTROL SYSTEMS

The analysis does not reveal the presence of azo dyes, as well as amines according to European Directive 2004/21 / EC (02-24-2004).

Gas chromatography and TLC mass spectrophotometry have also been practiced.

Dimethyl fumarate (DMF) has not been detected. Biocide prohibited in textiles for personal use in application of Royal Decree 1801/2003.



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It does not release toxic substances, carcinogens, mutagens, allergies, toxic for reproduction and that are not harmful under foreseeable and normal use conditions.

All tests have been carried out:

- Controlled environment.
- Temperature 22°C.
- Relative humidity 40%.

It does not shed lint.

It complies with what the norm determines on:

Resistance to microbial penetration - dry.

Resistance to microbial penetration - wet.

Detachment of particles.

Resistance to liquid penetration, according to ISO 811.

Bacterial filtration test (BFE) according to section 5.2.2 of the UNE-EN14683: 2019 + AC: 2019 standard  $\geq 93.4$

This test measures the percentage of bacteria size in shape ( $3 \pm 0.5$ )  $\mu\text{m}$ , filtered through the mask. The control material used as the reference strain is Staphylococcus aureus.

This genus is free of harmful or toxic ingredients.

It does not give off unpleasant odors.

Free of colophony.

This certificate will remain valid as long as the product, its manufacturing characteristics and materials used have not changed significantly.

This mask is not suitable for children under 3 years of age.

To the best of our knowledge and belief, it is our criteria that the genre under analysis complies with what the manufacturer specifies.

This report is based on the technical analysis of the sample provided and on ITEL's professional judgment.

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No. C-13760

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What we record for the appropriate purposes.

St. Fruitós de Bages, September 28, 2020



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Certification Unit

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