

	<b>Report</b>	<b>Title</b>	<b>Tests report</b>
		<b>Reference</b>	mgp\1937_ _19082020_15h41.pdf
<b>CERTAM</b> <b>1, RUE JOSEPH FOURIER</b> <b>76800 SAINT ETIENNE DU</b> <b>ROUVRAY</b>  <b>Phone : (33) 2 35 64 37 00</b>	<b>Prestation</b>	<b>Title</b>	<b>30 cleaning cycle(s)</b>
		<b>Reference</b>	
		<b>Recipient</b>	
<p>For further informations on this test report, contact  <a href="mailto:masques-gd-public@certam.fr">masques-gd-public@certam.fr</a></p>			
<b>Remarks</b>			
<b>Composition of the report</b>	4 pages, with 1 annex		
<p><b>Les essais sont réalisés en application de la note d'information interministérielle du 29 mars 2020 relative aux nouvelles catégories de masques réservées à des usages non sanitaires.</b></p> <p><b>Selon les termes de cette note, ils devront être complétés pas un test porté pendant 4 heures, à réaliser par l'industriel. Le masque ne doit pas avoir de couture sagittale (verticale nez bouche).</b></p> <p><b><u>Avertissement</u> : les résultats ne permettent pas une certification ou homologation selon les normes NF EN 149, NF EN 14683, ni selon toute autre norme ou règlement.</b></p>			

**VISA :**

**Frédéric Dionnet**  
**General manager of CERTAM**

**Date : 19/08/2020**



## 1. SAMPLES TRANSMITTED

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<b>Producer</b>	
<b>Samples date of receipt</b>	07/08/2020
<b>Internal reference</b>	07-08-2020%1937%A

<b>Producer reference</b>	
<b>Product type</b>	
<b>Description of transmitted samples</b>	

## 2. TESTS METHOD

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The tests have been realized following the CEN CWA17553:2020 document. Air permeability and filtration efficiency tests are described in annex.

## 3. RESULTS

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Tests		Containment of particles projection (1)
Features		Measure
<b>Air permeability (L.m<sup>-2</sup>.s<sup>-1</sup>)</b>	<b>Vacuum pressure of 100 Pa</b>	98
<b>Filtration efficiency (%)</b>	<b>Particles 3 µm</b>	94

(1) Containment of particles : measured flow from inside to outside, exhaled air



## 4. CONCLUSIONS

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In accordance with the CEN CWA17553:2020 relating to the new community face covering for medical use, after 30 cleaning cycle(s) show an air permeability and a filtration efficiency suitable for class 1 mask (protective masks for professional users in touch with public).

*Furthermore, we draw your attention to the fact that :*

*« The breathability measurement must be completed by a wearing test during 4 hours, this test must be realized by the producer. The mask must not have a sagittal suture (vertical nose to mouth) »*



## Annex for test method

### Air permeability

The breathability of the material is measured with a permabilimeter.

The test piece made from the sample has an area of 14.52 cm<sup>2</sup>.

The air surface flow rate(L.m<sup>-2</sup>.s<sup>-1</sup>) through the material is measured at a fixed vacuum pressure (100 Pa).

The CEN CWA17553:2020 impose a minimum flow rate of **96 L.m<sup>-2</sup>.s<sup>-1</sup>**.

The breathability measurement must be completed by a wearing test during 4 hours, this test must be realized by the producer.

### Filtration efficiency

The mask or material is die-cut in order to make a disk with a diameter of 48 mm. The sample is positioned in a test section filled with polydisperse « Holi » powder. The aerosol concentration in the test section and the flow rate through the sample (from inside to outside) are measured. The result given is the efficiency (E) corresponding to the percentage of particles (around 3 µm) stopped by the material.

$$E(\%) = 100 \times \left(1 - \frac{C_{out}}{C_{in}}\right)$$

Two levels of community face covering are considered according to their filtration efficiency to particles around 3 µm :

- **Class 1** (protective masks for professional users in touch with public)  
**Efficiency > 90%**
- **Class 2** (protective masks aimed to protect a group of people wearing those masks)  
**Efficiency > 70%**

