

Ecully, on 31/08/2020

TEST REPORT *		
* A copy duly signed is filed by IFTH		
PROTOCOL		
Tests carried out during the COVID-19 health crisis according to an internal protocol modelled on the DGA protocol.		
For further information relative to the present test report, please contact IFTH.		
ANALYSIS REPORT		
Report n°	Report date	Original report signed by :
2020-08-19-023	31/08/2020	Mr Jacques-Hervé LEVY Managing Director of IFTH
TYPE OF SUBMITTED SAMPLE		
UN1 : Personal protective mask for professionals in contact with the public.		COMPATIBLE
UN2 : Mask for public use to protect an entire group wearing those masks.		COMPATIBLE
REMARKS		
The results do not allow certification or registration according to the NF EN 149, NF EN 14683 standards, neither to any other standard or regulation.		
REPORT COMPOSITION		
2 pages		
As with DGA, tests are carried out in accordance with the inter-ministerial note of 29 March 2020 relating to new mask categories for non-health uses.		
According to this note, they must be complemented by a 4 hour wearing test, to be carried out by the manufacturer. The mask must not show any sagittal sewing (nose-mouth vertical).		
SUBMITTED SAMPLES		
Registration n°	2020-08-19-023	
Supplier	THUASNE	
Sample reference	Knit mask - RI CI 442 - B2 -100 washes (washes carried out by the customer)	
Descriptions of the provided samples	PA 100 Knit	
TEST CARRIED OUT		
Tests carried out by IFTH are based on the test protocol described in the DGA document of 25 mars 2020		
RESULTS		
Pre-treatment :	Prior washing	
Validation of results :	Marlène PEYRILLOUS Chemistry Laboratory Manager	
Use cases		Commentary
Characteristic	Use of droplets retention (*)	
Air permeability (in L.m-2.S-1)	Negative pressure 100 Pa 120	/
Protection efficiency against aerosols (in %)	Particles of 3 µm 99	/
Dimensional measurements	(L x Hmax) Hmax L NM	/
(*) Use of droplets retention : Airflow measured from the inside to the outside, on exhalation.		
CONCLUSION		
In accordance with the inter-ministerial note of 29 March 2020 relating to new categories of masks reserved to non-health uses, the tested product (mask or complex) offers an air permeability of 127 L.m-2.S-1 and filtration efficiency against 3 µm emitted particles of 99% :		
According to the test protocol developed by IFTH, the material is :		Compatible with the use of UNS1 and UNS2 mask type
Results of the present report are valid only for samples tested by IFTH.		
It is recalled that IFTH does not validate mask's design or dimensional. The attached measures are provided for information purposes only. In accordance with the note of 29 March, to prevent leaks at the mask edges, the manufacturer should verify that the one allows a facepiece-to-face fit with a nose and chin cover and that there is no sagittal sewing (nose-mouth vertical). We also draw your attention on the fact that the measure of breathability must be complemented by a 4 hour wearing test, to be carried out by the manufacturer.		

TEST DESCRIPTIVE ANNEX

Air permeability

The material breathability is tested with a permeabilimeter. The measuring surface is 20 cm².

The surface air rate (L.m-2.S-1) passing through the material is measured with a vacuum set at 100 PA. 96 L.m-2.S-1.

The measure of breathability above must be complemented by a 4 hour wearing test, to be carried out by the manufacturer.

Retention efficiency

The test bench used is an aerosol filtration bench which is modelled on the tulip bench detailed in the inter-ministerial note of 25 March 2020.

The product (mask or complex) is die-cut to form two disks of 26 mm diameter per measure (3 measures carried out)

Samples are placed in a vein containing an aerosol.

Aerosol concentrations into the vein and flow passing through the sample from inside to the outside are measured.

The result announced is the percentage of particles of 3 µm and 1 µm diameter stopped by the material.

$E = 1 - \text{Caval} / \text{Camont}$

The inter-ministerial note of 29 March 2020 relating to new mask categories for non-health uses requires a filtration of 3 µm particles emitted by :

UNS 1 : Personal protective mask for professionals in contact with the public ($E > 90\%$)

UNS 2 : Mask for public use to protect an entire group wearing those masks ($E > 70\%$)

Note : Filtration efficiency is measured only if air permeability exceeds 96 L.m-2.S-1