

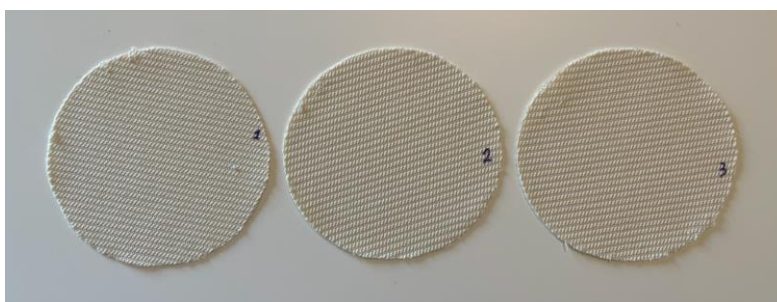


**TEST REPORT**  
**MAA-FLOWRES-PG0223**

**Measurement of specific airflow resistance**  
**according to UNI EN ISO 9053-2:2020**

<b>Client</b>	Pugi.rg srl Via Garibaldi, 33/b 51037 Montale (PT)								
<b>Test date</b>	08/05/2023								
<b>Test laboratory</b>	Laboratorio di Acustica - Dipartimento di Ingegneria Università degli Studi di Ferrara Via Saragat, 1 – 44122 FERRARA								
<b>Measurement method</b>	Alternating airflow method according to ISO 9053-2:2020								
<b>Tested material</b>	<table border="1"><thead><tr><th colspan="2">Fabric</th></tr></thead><tbody><tr><td><b>Model</b></td><td>BIO</td></tr><tr><td><b>Composition</b></td><td>100% Recycled PL</td></tr><tr><td><b>Weight</b></td><td>400 ± 7% g/m<sup>2</sup></td></tr></tbody></table>	Fabric		<b>Model</b>	BIO	<b>Composition</b>	100% Recycled PL	<b>Weight</b>	400 ± 7% g/m <sup>2</sup>
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<b>Weight</b>	400 ± 7% g/m <sup>2</sup>								
<b>Flow velocity</b>	1.07 mm/s								
<b>Frequency of the piston movement</b>	2 Hz								
<b>Number of test specimens</b>	3								
<b>Diameter of test specimen</b>	100 mm								

**Picture of test specimens**





**Result calculation**

$$R_s = \frac{\Delta p}{q_v} \cdot A$$

where:

$\Delta p$  is the RMS air pressure difference, across the test specimen, due to the alternating airflow [Pa];

$q_v$  is the RMS volumetric airflow rate, passing through the test specimen [m<sup>3</sup>/s];

$A$  is the cross-section area of the test specimen, perpendicular to the direction of flow [m<sup>2</sup>].

**Test equipment**

Name	Manufacturer	Model
Microphone	Brüel & Kjær	4165
Preamplifier	Larson Davis	900B
Acquisition System	NI	4431
Software	Materiacustica	Resitivity_MAA

**Environmental conditions**

Temperature	24°C
Relative Humidity	44%
Atmospheric Pressure	1008 mbar

Results			
Specific airflow resistance $R_s$ (Pa·s/m)	Specimen A	Specimen B	Specimen C
	689	693	677

$R_s$ (Average)	<b>686 Pa·s/m</b>
$R_s$ (Standard deviation)	8 Pa·s/m

Ferrara, 11/05/23

The responsible for the test  
Dr. Andrea Farnetani PhD