

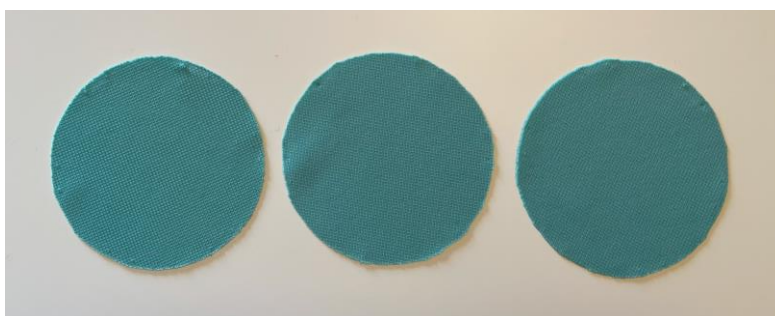


TEST REPORT
MAA-FLOWRES-PG1023

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

Client	Pugi.rg srl Via Garibaldi, 33/b 51037 Montale (PT)								
Test date	09/05/2023								
Test laboratory	Laboratorio di Acustica - Dipartimento di Ingegneria Università degli Studi di Ferrara Via Saragat, 1 – 44122 FERRARA								
Measurement method	Alternating airflow method according to ISO 9053-2:2020								
Tested material	<table border="1"><thead><tr><th colspan="2">Fabric</th></tr></thead><tbody><tr><td>Model</td><td>Gemma S</td></tr><tr><td>Composition</td><td>100% PL FR (Tr Cs)</td></tr><tr><td>Weight</td><td>250 ± 5% g/m²</td></tr></tbody></table>	Fabric		Model	Gemma S	Composition	100% PL FR (Tr Cs)	Weight	250 ± 5% g/m ²
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Model	Gemma S								
Composition	100% PL FR (Tr Cs)								
Weight	250 ± 5% g/m ²								
Flow velocity	1.07 mm/s								
Frequency of the piston movement	2 Hz								
Number of test specimens	3								
Diameter of test specimen	100 mm								

Picture of test specimens





Result calculation

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

where:

Δp 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 [m³/s];

A is the cross-section area of the test specimen, perpendicular to the direction of flow [m²].

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	1009 mbar

Results			
Specific airflow resistance R_s (Pa·s/m)	Specimen A	Specimen B	Specimen C
	71	75	71

R_s (Average)	72 Pa·s/m
R_s (Standard deviation)	2 Pa·s/m

Ferrara, 11/05/23

The responsible for the test
Dr. Andrea Farnetani PhD