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2013-11-21
M100827/43 MSG/JRE

Fabric Clara
Manufacturer Kvadrat A/S

Determination of the airflow resistance according to EN 29053

Test Report No. M100827/43

Client:	Kvadrat A/S Lundbergsvej 10 DK – 8400 Ebeltoft
Consultant:	M.Eng. Philipp Meistring
Date of report:	2013-11-21
Date of delivery:	2013-11-18
Date of test:	2013-11-20
Total number of pages:	In total 6 pages: 4 pages text, 1 page Appendix A and 1 page Appendix B.

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1 Task

On behalf of Kvadrat A/S, DK – 8400 Ebeltoft, the airflow resistance of the upholstery fabric type Clara has to be measured according to EN 29053 [1].

2 Basics

This test report is based on the following documents:

[1] EN 29053 “Acoustics – Materials for acoustical applications – Determination of airflow resistance”. 1993

3 Test object

The tested material is described by the manufacturer as follows:

- upholstery fabric type Clara, color 384
- manufacturer Kvadrat A/S
- material: 92 % new wool, 8 % nylon

The test laboratory has determined the following parameters:

- area specific mass m'' = 319 g/m²
- thickness t = 0.82 mm

4 Execution of measurements

The airflow resistance was determined according to EN 29053 [1].

The measurements for the determination of the airflow resistance were carried out at different air velocities. The continuous airflow method was applied. The specimen holder has a diameter of 100 mm. The test specimen was fitted flat over the specimen holder, without stretching the material, sealed at the edges and fixed.

According to the standard the specific airflow resistance R_s is indicated as measurement result which was determined by extrapolation (linear regression) at an airflow velocity of u = 0.0005 m/s.

The test equipment used for the measurements is listed in Appendix B.

5 Measurement results

For the tested upholstery fabric type Clara a specific airflow resistance of

$$R_s = 151 \text{ Pa} \cdot \text{s/m}$$

was determined.

For further information regarding the measurement, see Appendix A.

6 Remarks

The determined test results only refer to the prevailing conditions on the day of measurements.

This test report may only be published and copied as a whole including all of its appendixes. The publishing of extracts requires the prior written consent of Müller-BBM GmbH.

M. Eng. Philipp Meistring

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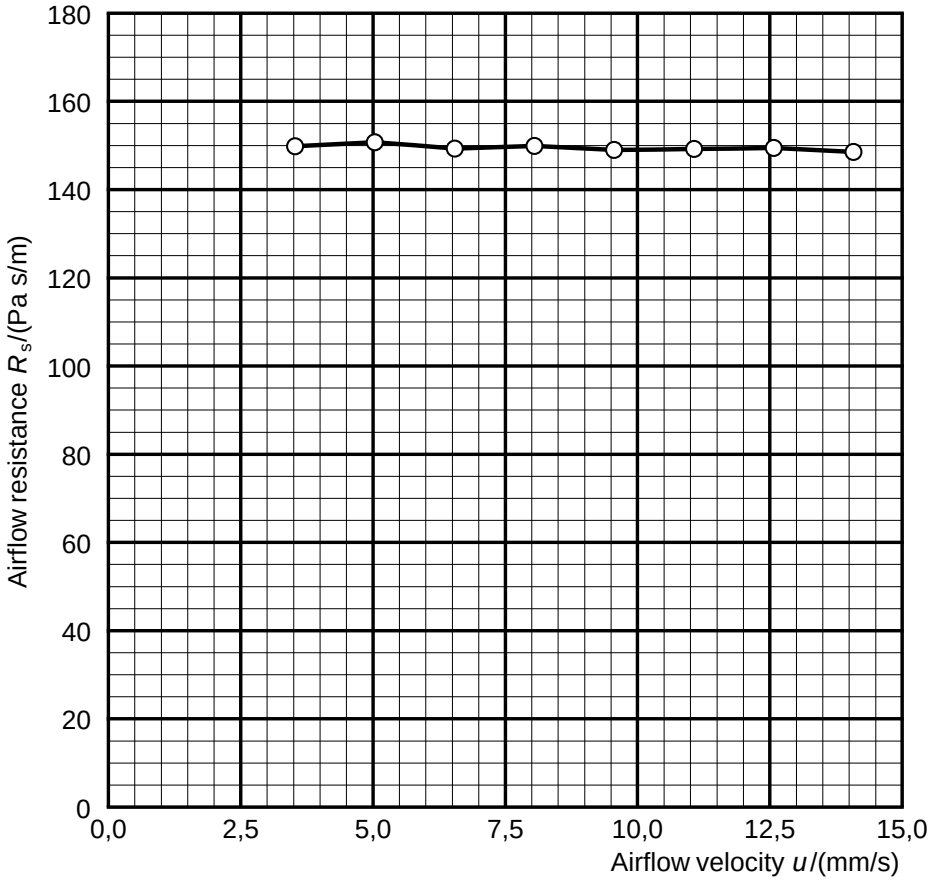
EN 29053
Determination of airflow resistance

Client: Kvadrat A S
8400 Ebeltoft Denmark
Order Number: M100827
Müller-BBM Probe Number: 9588
Test object: - upholstery fabric type Clara color 384
- material: 92 % new wool, 8 % Nylon

Diameter:	100	mm
Thickness:	0.82	mm
Area-specific mass:	319	g/m^2

Barometric pressure:
B = 94,1 kPa
Temperature:
θ = 22,8 °C
Relative humidity:
r. h. = 20,9 %

u/ (mm/s)	R_s/ (Pa s/m)
3.52	150
5.03	151
6.54	149
8.05	150
9.56	149
11.07	149
12.58	149
14.08	148



Airflow resistance R_s = 151 Pa s/m

Laboratory: Planegg
Responsible: Meistring
Date: 2013/11/20

List of test equipment

For the measurements and evaluations, the following test equipment was applied:

Name	Manufacturer	Type	Serial-No.
air flow resistance measurement system	Müller-BBM	M89319-00	315003
Software for data logging and evaluation	Müller-BBM	m|ars	v1.0.0.2
Digital measuring slide	Mitutoyo	CD-15PPR	07019377
Electronic balance	Kern	440-49N	WC0633572