





Fraunhofer TESTED® DEVICE PPS MicroSicuro CR/A R Report No. PF 2305-1421

Statement of Qualification

Single product
Particle Emission

Statement of Qualification • Single product

Customer

Pfennig Reinigungstechnik GmbH Heubachstrasse 1 87471 Durach Germany

Test result/Classification

When operated in a dry state using the given test parameters, the mop MicroSicuro CR/A R is suitable for use in cleanrooms up to the following Air Cleanliness Class according to ISO 14644-1:

Test parame Linear con

Overall re

Com	ponent	tested

Category:	Materials
Subcategory:	Consumables
Product name:	MicroSicuro CR/A R (manufacturing date: 9/2022; color: white with blue bristle stripes; material: 100 % polyester microfiber recyclate; article number: Prototype; pre-treat- ment: washed)

Random sampling of particle emissions (airborne)

Standards/Guidelines:

Test devices:

Test environment parameters:

Test procedure parameters:

ISO 14644-1, -14; VDI 2083 Part 9.2, Part 9.1 (without 24-hour running-in period) The norms stated generally refer to the version valid at the time of the tests.

Optical particle counter: LasAir II 110 with measuring ranges $\geq 0.1 \,\mu\text{m}$, $\geq 0.2 \,\mu\text{m}$, $\geq 0.3 \,\mu\text{m}$, $\geq 0.5 \,\mu\text{m}$,

• Cleanroom Air Cleanliness Class (according to I	SO 14644-1): ISO 1
Airflow velocity:	0.45 m/s
Airflow pattern:	vertical laminar flow
Temperature:	22°C±0.5°C
Relative humidity:	

Test bench according to ISO 9073-10:

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IPA

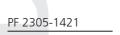
Sample clamping position:	flat
Length between clamping points:	230 mm
Motion cycle:	
– Linear compression s:	120 mm
– Torsion:	180°
Cycle time t:	1 s
Sampling chamber:	none
Duration of stress applied to test piece:	100 min
Distance between particle counting probe and test piece:	130 mm

Fraunhofer Institute for Manufacturing

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Engineering and Automation IPA

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Report No. current document

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eter(s)	Air Cleanlines Class
ression = 120 mm 0° = 1 s	5
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This corresponds with ISO-ACP_c Class 5 according to VDI 2083 Part 9.2.

Please note: Transport damages, incorrect installation, aging behavior etc. can influence the test result.

The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

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	applies to the named
	product in its original sta
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