valid until: November 16, 2028

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DEVICE

PPS
Clino OneWay Ultra PW
Report No. PF 2305-1421

Statement of
Qualification
Single product
Particle Emission

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Statement of Qualification · Single product

Customer

Pfennig Reinigungstechnik GmbH
Heubachstrasse 1
87471 Durach
Germany

Component tested

Category: Materials

Subcategory: Consumables

Product name: Clino OneWay Ultra PW
(manufacturing date: 2/16/2023; color: white with blue bristle stripes; material: 100 % polyester; article number: 3500325; charge number: 2023/2; pre-treatment: pre-washed)

Random sampling of particle emissions (airborne)

Standards/Guidelines: 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.

Test devices: Optical particle counter:
LasAir II 110 with measuring ranges ≥ 0.1 µm, ≥ 0.2 µm, ≥ 0.3 µm, ≥ 0.5 µm,

Test environment parameters:

- Cleanroom Air Cleanliness Class (according to ISO 14644-1): ISO 1
- Airflow velocity: 0.45 m/s
- Airflow pattern: vertical laminar flow
- Temperature: 22 °C ± 0.5 °C
- Relative humidity: 45 % ± 5 %

Test procedure parameters:

Test bench according to ISO 9073-10:

- 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

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Test result / Classification

When operated in a dry state using the given test parameters, the mop Clino OneWay Ultra PW is suitable for use in cleanrooms up to the following Air Cleanliness Class according to ISO 14644-1:

Test parameter(s)	Air Cleanlines Class
Linear compression = 120 mm Torsion = 180° Cycle time t = 1 s	**5**
Overall result	

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.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

Department of Ultraclean Technology and Micromanufacturing

Nobelstrasse 12
70569 Stuttgart
Germany

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on behalf of
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

This document only applies to the named product in its original state and is valid for a period of 5 years from the current date the document was issued. The document can be verified under **www.tested-device.com**.

DUPLICATE