IPA

Cleanroom (atmospheric)

valid until: October 1, 2030

Fraunhofer

TESTED®
DEVICE

PULS GmbH
CW1000
Report No. PU 2507-1644

DUPLICATE

Statement of
Qualification

Single product
Outgassing Behavior
VOC/SVOC

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Statement of Qualification · Single product

Customer

PULS GmbH
Elektrastrasse 6
81925 Munich
Germany

Tested product

Category: Working Place and Operator

Subcategory: Work Equipment

Product name: CW1000
consisting of:
- CW1000.WALL (manufacturing date: 4/2025; article number: 101528; serial number: 01154890)
- CW1000.SEPA (manufacturing date: 7/2025; serial number: 1100238432)
- CW1000.MOCHA (manufacturing date: 7/2025; serial number: 1100230353)

Emission measurements with purge-and-trap thermodesorption method and gas chromatography combined with mass spectrometry (TD-GC/MS)

Standards/guidelines: ISO 14644-8, -15
The norms stated generally refer to the version valid at the time of the tests.

Test equipment: Measuring station: ..... PerkinElmer Clarus 600, Clarus SQ8 ATD 650

Test procedure parameters:
- Retention range (VOC): ..... C6 to C16
- Outgassing test temperature: ..... 23 °C
- Duration of preconditioning: ..... > 10 h
- Flow rate purge gas: ..... 100 l/h
- Flow rate sampling gas: ..... 10 l/h
- Duration of sampling: ..... 60 min
- Volume of the emission cell: ..... 100 l
- Emission cell material: ..... stainless steel

Test result / Classification

The outgassing behavior of the inductive charger system CW1000 consisting of CW1000.WALL, CW1000.SEPA and CW1000.MOCHA at the stated temperatures was investigated according to ISO 14644-15. Based on the outgassing rates determined for the specific equipment, the following classification was made for the corresponding Contaminant Category:

Contaminant Category (x)	SER_u [1] 23 °C [g/unit·s]	ISO ACC_e Class (x) based on 23° C
VOC	1.9×10^{-9}	**-8.7**
SVOC	$< 2.8 \times 10^{-12}$	**< -11.6**
Refractories	1.8×10^{-10}	**--**
Siloxanes	9.4×10^{-11}	**--**

[1] SER_u: Unit-specific emission rate

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

Business unit
Testing and Certification

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-- — Place, current date

on behalf of
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

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