



Fraunhofer

**TESTED[®]
DEVICE**

GERFLOR
GTI EL5

Report No. GE 1505-762

DUPLICATE

Statement of
Qualification

Cleaning Performance
(Particles)

Statement of Qualification

Customer
 GERFLOR
 ZI du Bois des Lots
 26130 SAINT PAUL TROIS CHATEAUX
 France

Component tested

Category: Cleanroom Facilities
 Subcategory: Wall, Ceiling, Floor
 Product name: GTI EL5
 (date of manufacturing: 2/4/2015; color: light grey; batch number: 0501402)

Determination of cleaning performance (particles)

Standards/Guidelines: VDI 2083-17; ISO 14644-9
 The norms stated refer to the relevant editions applicable at the time of the tests.

Test devices: Glancing light particle counter for surface inspection:
 PartSens with measuring ranges $\geq 5 \mu\text{m}$, $\geq 15 \mu\text{m}$, $\geq 25 \mu\text{m}$, $\geq 50 \mu\text{m}$, $\geq 100 \mu\text{m}$ and $\geq 150 \mu\text{m}$

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 \pm 0.5 °C
- Relative humidity: 45 % \pm 5 %

Test procedure parameters:

- Reference surface: stainless steel 1.4301 (brushed)
- Cleanroom cloths:soaked with ultra-pure water
- Linear wiping simulator:
 - Surface pressure p: 1 x 10⁻³ N/mm²
 - Traversing velocity v:.....0.25 m/s
- Number of single wiping tests per test piece:..... 10
- Test solution: one spatula tip of test dust
 (ATD test dust ISO 12103-1 fine grade A2,
 Ellis Components, Alfreton, GB) dissolved in 10 ml isopropanol
- Cleaning of surfaces:single wiping step
- Particle size range:..... $\geq 5 \mu\text{m}$

Test result / Classification

When cleaned within the linear wiping simulator using the GTI EL5 soaked with ultra-pure water, the following test result could be provided according to VDI 2083-17:

| Improvement in SCP Classe(s) | Ø Cleaning degree [%] |
|------------------------------|-----------------------|
| 1.8 | 99.5 |

The cleaning step concerns the reference surface. The amount of particulate contamination acquired and transported by the test piece during the wiping process was not taken into account.

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.

For further information about the test environment and parameters, please refer to 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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Place, date of first document issued

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Place, current date

on behalf of 
 Frank Bürger, Project Manager Fraunhofer IPA