



**Fraunhofer**

**TESTED<sup>®</sup>  
DEVICE**

GERFLOR  
GTI EL5

**Report No. GE 1505-762**

DUPLICATE

Statement of  
Qualification

Outgassing Behavior  
(Ammonia)

# 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)

## Emission chamber measurements with gas impaction in combination with ion chromatography (IC)

Standards/Guidelines: ISO 14644-8; VDI 2083-17; VDI 2452 (Impingement); ISO 14911 (Cations)  
 The norms stated refer to the relevant editions applicable at the time of the tests.

Testing equipment:
 

- Measuring station:.....Metrohm Professional IC 850
- Sampling chamber:.....Markes International µCTE

Sample storage:
 

- Age of sample: ..... 32 days (23°C measurement)
- Age of sample: ..... 33 days (90°C measurement)

Test procedure parameters: Outgassing test temperatures: ..... 23°C and 90°C

## Test result / Classification

The outgassing behavior of GTI EL5 at the stated temperatures was investigated according to VDI 2083-17. Based on the outgassing rates determined for the specific surfaces, the following material classification was made for the corresponding contaminant group:

Test temperature	Contaminant group	Specific emission rate [g/m²s]	ISO-ACC <sub>m</sub> Class (x)
23 °C	Ammonia (NH <sub>3</sub> )	< 5.8 x 10 <sup>-10</sup>	< -9.2
90 °C	Ammonia (NH <sub>3</sub> )	2.2 x 10 <sup>-7</sup>	--

The detection limit at the time of the test was ISO-ACC<sub>m</sub> Class = -9.2 (NH<sub>3</sub>). The ISO-ACC<sub>m</sub> Class (x) was assigned for the named contaminant group x at the test temperature of 23 °C (room temperature).

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

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on behalf of   
 Frank Bürger, Project Manager Fraunhofer IPA