



Fraunhofer

**TESTED[®]
DEVICE**

Hilti Entwicklungsgesellschaft mbH
SF 6H-A22

Report No. HI 1803-1019

DUPLICATE

Statement of
Qualification

Particle Emission

Statement of Qualification

Customer
 Hilti Entwicklungsgesellschaft mbH
 Hiltistrasse 6
 86916 Kaufering
 Germany

Component tested

Category: Working Place and Operator
 Subcategory: Work Equipment
 Product name: Cordless 22V hammer drill driver SF 6H-A22
 (manufacturing date: 1/2018; color: red; article number: 2159681)

Test result / Classification

When operated under the specified test conditions, the cordless 22V hammer drill driver SF 6H-A22 is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Class according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Installation position: horizontal Number of revolutions: Setting II Capacity: Setting II (1600 rpm)	8
Overall result	8

Random sampling of particle emissions (airborne) at representative sites

Standards/Guidelines: ISO 14644-1, -14
 The norms stated generally refer to the version valid at the time of the tests.

Test devices: Optical particle counter:
 LasAir II 110 and LasAir III 110 with measuring ranges $\geq 0.1 \mu\text{m}$, $\geq 0.2 \mu\text{m}$, $\geq 0.3 \mu\text{m}$, $\geq 0.5 \mu\text{m}$, $\geq 1.0 \mu\text{m}$ and $\geq 5.0 \mu\text{m}$

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:

- Installation position: horizontal
- Number of revolutions:.....Setting II (0 rpm - 1600 rpm)
- Capacity: 100 % of setting II = 1600 rpm

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

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on behalf of 
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