



Fraunhofer

TESTED<sup>®</sup>  
DEVICE

Brecon Group  
Granite Standard Coil Coated Steel  
**Report No. BR 1804-1024**

DUPLICATE

Statement of  
Qualification

Hydrogen Peroxide  
Absorption/Desorption

Statement of Qualification

Customer	Brecon Cleanroom Systems B.V. Droogdokkeneiland 7 5026 SP Tilburg The Netherlands
Component tested	
Category:	Materials
Subcategory:	Metals
Product name:	Granite Standard Coil Coated Steel (manufacturing date: 4/2018; article number: BM-W-SHC-101; batch number: 21705697 02)
Hydrogen peroxide absorption / desorption	
Methodics:	VDI 2083 Part 20 The norms stated generally refer to the version valid at the time of the tests
Air-conditioned laboratory environment:	Temperature: .....22 °C ± 0.5 °C
Test procedure parameters:	<ul style="list-style-type: none"><li>• Emission test cell volume: ..... 16.5 cm<sup>3</sup></li><li>• Exposed surface area: ..... 33 cm<sup>2</sup></li><li>• H<sub>2</sub>O<sub>2</sub> vapor concentration: ..... 40 ± 20 ppm(V)</li><li>• Exposure duration: ..... 60 min</li><li>• Air exchange rate during aeration:..... 100 min<sup>-1</sup></li><li>• Test cell .....23 °C ± 2 °C</li></ul>

Test result / Classification

The hydrogen peroxide absorption/desorption of Granite Standard Coil Co-ated Steel was investigated with the stated test parameters. Using the proce-dure laid down in VDI 2083 Part 20, the following test result was obtained:

Ø k-value [min]	Standard deviation [min]	Classification
5.1	0.5	fast

The k-value represents the required decay time to reduce the hydrogen peroxide vapor concentration measured at the beginning of the aeration phase to one tenth of the original concentration. The material classification is based on three separate measurements. The blank value of the test setup is subtracted from each measurement value. The medium k-value is transfer-red to the following classification:

- ≤ 5 min:..... non-absorptive
- > 5-≤ 15 min:.....fast
- > 15-≤ 60 min:.....medium
- > 60 min:..... slow
- Not determinable: ..... catalytic activity

The k-value can only be used to make a comparative material assessment. Provided the maximum hydrogen peroxide vapor concentration during material exposure is within the defined limit, it does not affect the calculated k-values.

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	BR 1804-1024 Report No. first document	Stuttgart, August 1, 2018 Place, date of first document issued
Department of Ultraclean Technology and Micromanufacturing	-- Report No. current document	-- Place, current date
Nobelstrasse 12 70569 Stuttgart Germany	on behalf of Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA	