



Fraunhofer

TESTED[®] DEVICE

Roxtec International AB
SFH 8x1 HF ALU PC
Report No. RO 2410-1566

DUPLICATE

Statement of
Qualification

Single product
Particle Emission
in Cleanroom
(atmospheric)

Customer	Roxtec International AB Rombvägen 2 37165 Lyckeby Sweden
Component tested	
Category:	Cleanroom Facilities
Subcategory:	Wall/Ceiling/Floor/Door
Product name:	SFH 8x1 High finish (HF) powder coated (PC) RAL9016 aluminum frame with Roxylon EPDM modules using assembly gel white (lubricant) and TSL 8x8 Butyl strip between frame and structure (manufacturing date: 8/2024; article number: 5SFH000013149)

Random sampling of particle emissions (airborne) at representative sites in cleanroom under atmospheric conditions

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 $\geq 0.1\text{ }\mu\text{m}$, $\geq 0.2\text{ }\mu\text{m}$, $\geq 0.3\text{ }\mu\text{m}$, $\geq 0.5\text{ }\mu\text{m}$, $\geq 1.0\text{ }\mu\text{m}$ and $\geq 5.0\text{ }\mu\text{m}$
Test environment parameters:	<ul style="list-style-type: none">Cleanroom Air Cleanliness Class (according to ISO 14644-1):..... ISO 1Airflow velocity:.....0.45 m/sAirflow pattern:..... vertical laminar flowRoom temperature:22 °C ± 0.5 °CRelative humidity: 45 % ± 5 %
Test procedure parameters:	<ul style="list-style-type: none">Structure-borne noise: approx. 50 HzOscillation velocity (Ø):.....v = 0.3680 mm/sOscillation acceleration (Ø):.....a = 0.1025 m/s²Deflection of the system (Ø):..... s = 0.0273 mm

Test result / Classification	When operated under the specified test conditions (room temperature: 22 °C ± 0.5 °C; relative humidity: 45 % ± 5 %), the SFH 8x1 High finish (HF) powder coated (PC) RAL9016 aluminum frame with Roxylon EPDM modules using assembly gel white (lubricant) and TSL 8x8 Butyl strip between frame and structure is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Class according to ISO 14644-1:
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Test parameter(s)	Air Cleanlines Class
Structure-borne noise = approx. 50 Hz	1
Overall result	

Please note: Transport damages, incorrect installation, oil leakage, aging behavior, corrosion etc. can influence the test result.

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	RO 2410-1566 Report No. first document	Stuttgart, December 19, 2024 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	