



Fraunhofer

TESTED[®] DEVICE

igus GmbH

E14.4.100.0

Report No. IG 2411-1575

Single product Particle emission in Dry-Cleanroom with Pre-aging

Qualification Certificate

This is to certify that the product mentioned above, provided by

igus GmbH
Cologne, Germany

has been awarded a Fraunhofer certificate TESTED DEVICE
bearing the report number IG 2411-1575.

When operated under the specified test conditions (room
temperature of $22^{\circ}\text{C} \pm 1^{\circ}\text{C}$; dew point: $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$), the
E14.4.100.0 of the e-chain series E14 (color: black) is suitable for
use in dry-cleanrooms fulfilling the specifications of the following
Air Cleanliness Classes according to ISO 14644-1:

**Pre-aging, operation time in dry room:
10 months, 15.102.956 cycles**

Test parameter(s)	Air Cleanliness Class
$v_1 = 0.5 \text{ m/s}; a_1 = 1.0 \text{ m/s}^2$	4
$v_2 = 1.0 \text{ m/s}; a_2 = 2.0 \text{ m/s}^2$	4
$v_3 = 2.0 \text{ m/s}; a_3 = 4.0 \text{ m/s}^2$	4
Overall result	4

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

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Stuttgart, February 3, 2025
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Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

This document only
applies to the named
product in its original state
and is valid for a period of
5 years from the date the
first document was issued.
The document can be
verified under
www.tested-device.com.

Detailed information and
parameters of the test
environment can be found
in the Fraunhofer IPA test
report.