



valid until: January 30, 2031

Fraunhofer

TESTED[®] DEVICE

Tsubakimoto Chain Co.
FLATVEYOR ZP Type (R130)
Report No. TS 2511-1693

Single product Particle Emission in Cleanroom (atmospheric)

Qualification Certificate

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

Tsubakimoto Chain Co.
Kyoto, Japan

has been awarded a Fraunhofer certificate TESTED DEVICE bearing the report number TS 2511-1693.

The cable FLATVEYOR ZP Type (R130), color: white, was assessed in compliance with ISO 14644-14. When operated under the specified test conditions (room temperature: 22 °C ± 0.5 °C; relative humidity: 45 % ± 5 %), it is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Classes according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
$v_1 = 0.5 \text{ m/s}; a_1 = 1.0 \text{ m/s}^2$	1
$v_2 = 1.0 \text{ m/s}; a_2 = 2.0 \text{ m/s}^2$	1
$v_3 = 2.0 \text{ m/s}; a_3 = 4.0 \text{ m/s}^2$	1
Overall result	1

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

TS 2511-1693
Report No. first document

Stuttgart, January 30, 2026
Place, date of first document issued

--
Report No. current document

--
Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, head of business unit Testing and Certification

DUPLICATE

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.