



Fraunhofer

TESTED[®] DEVICE

W. L. Gore & Associates, Inc.
Energy chain and cable systems
Report No. GO 0810-448

DUPLICATE

Statement of
Qualification

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Customer: W. L. Gore & Associates, Inc.
385 Starr Road
Landenberg, PA 19350
USA

Component tested: Energy chain and cable systems

Type: Flat Cable Assembly TK 31540-01

Tests performed: Random sample measurements of particle emission (airborne) at representative points

Test parameters: Stroke length: 820mm
Set of parameters 1: v_1 : 0.5 m/s; a_1 : 1.0 m/s²
Set of parameters 2: v_2 : 1.0 m/s; a_2 : 2.0 m/s²
Set of parameters 3: v_3 : 2.0 m/s; a_3 : 5.0 m/s²

Test results / classification: When the specimen is being operated at the above mentioned test parameters, it is suitable for use in cleanrooms fulfilling the Air Cleanliness Class ISO Class 1 in accordance to ISO 14644-1.

Standards / guidelines used for the qualification: VDI 2083 Part 1, 4 and 9.1; ISO 14644-1

Test parameters of the cleanroom environment: Cleanroom of Air Cleanliness Class ISO Class 1 (according to ISO 14644-1)

Air flow velocity: 0.45 m/s

Air flow guidance: vertical unidirectional air flow from ceiling to floor (raised floor)

Temperature: 22 °C ± 0.5 °C (71.6 °F ± 0.9 °F)

Relative humidity: 45 % ± 5 %

The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

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Stuttgart, November 28th 2008
Place, date

i. A. 
Signature of project manager

