

INTERNATIONAL STANDARD

AMENDMENT 1

Vacuum cleaners for household use – Part 1: Dry vacuum cleaners – Methods for measuring the performance

<https://standards.iec.ch/catalog/standards/sist/497a0ff-8f4a-460c-ad18-1d0f6676f230/iec-60312-1-2010-amd1-2011>

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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Vacuum cleaners for household use – Part 1: Dry vacuum cleaners – Methods for measuring the performance

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FOREWORD

This amendment has been prepared by subcommittee 59F: Floor treatment appliances, of IEC technical committee 59: Performance of household electrical appliances.

The text of this amendment is based on the following documents:

| CDV | Report on voting |
|-------------|------------------|
| 59F/206/CDV | 59F/207/RVC |

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

The following changes to IEC 60312-1 concern Subclauses 5.5 and 5.9 and the related specifications in Subclauses 7.2.2 and 7.2.6.

The reason for this is due to the tightening of the specification to the cotton linters used in the test dust. In order to reproduce the airflow restricting conditions expected during the development of this test it is necessary to use more test dust when Condition 3 is used as a stopping point. Further, it provides a specification for the cellulose dust.

In addition to this an updated specification of the cushion slip material is available.

5.5 Fibre removal from carpets and upholstery

5.5.3 Fibre removal from upholstery²

Delete superscript 2 from the title of 5.5.3, including the footnote.

5.9.2 Determination of suction pressure change with loaded dust receptacle

5.9.2.1 Test conditions

Add the following note after the second paragraph (ending with ".measurements of suction"):

NOTE It is permissible to use the pressure tapping on the plenum chamber to measure pressure.

5.9.2.3 Test method

Replace “Condition 3” with the following:

Condition 3: The amount of injected test dust has reached a total of 100 g/l of the maximum usable volume of the dust receptacle (see 5.7).

Delete NOTE 2.

7.2.2 Standard test dust

7.2.2.3 Simulated household dust

Replace the second paragraph (commencing “The cotton linters shall be cut with an upper length of 4 mm”) with the following:

The cotton linters shall be cut with an upper length of 4 mm with the following typical length range in a linters screening mill. The fibre length (l) may be checked using a Kajaani FiberLab¹ for example.

l_m (mm): 2,05 (weight weighted length)
Admissible scatter (mm): $\pm 0,2$

| Fibre length range mm | Average relative fibre quantity % | Deviation % |
|--------------------------|--------------------------------------|----------------|
| 0 – 0,2 | 0,75 | $\pm 0,3$ |
| 0,2 – 0,5 | 6,25 | ± 3 |
| 0,5 – 1,2 | 22 | ± 8 |
| 1,2 – 2,0 | 25 | ± 5 |
| 2,0 – 3,2 | 22 | ± 5 |
| 3,2 – | 24 | ± 8 |

Before cutting, the linters shall have been pressed into a bale and stored at a temperature of $(20 + 2)^\circ\text{C}$ and a relative humidity of $(40 + 5)\%$. The residual moisture of the cut linters shall not exceed 2,5 %.

Besides second cut linters, raw cotton which is cut to the appropriate length may also be used.

Replace NOTE 2 with the following new text:

The manufacturer of this test material shall ensure that the batch-wise inspection of the appropriate length and quality is carried out. A certificate shall be included to each linters supply with indication of life time and storage conditions.

¹ Kajaani FiberLab is a trade mark and mentioning this does not constitute an endorsement by IEC.

Add the following new Subclause 7.2.2.6:

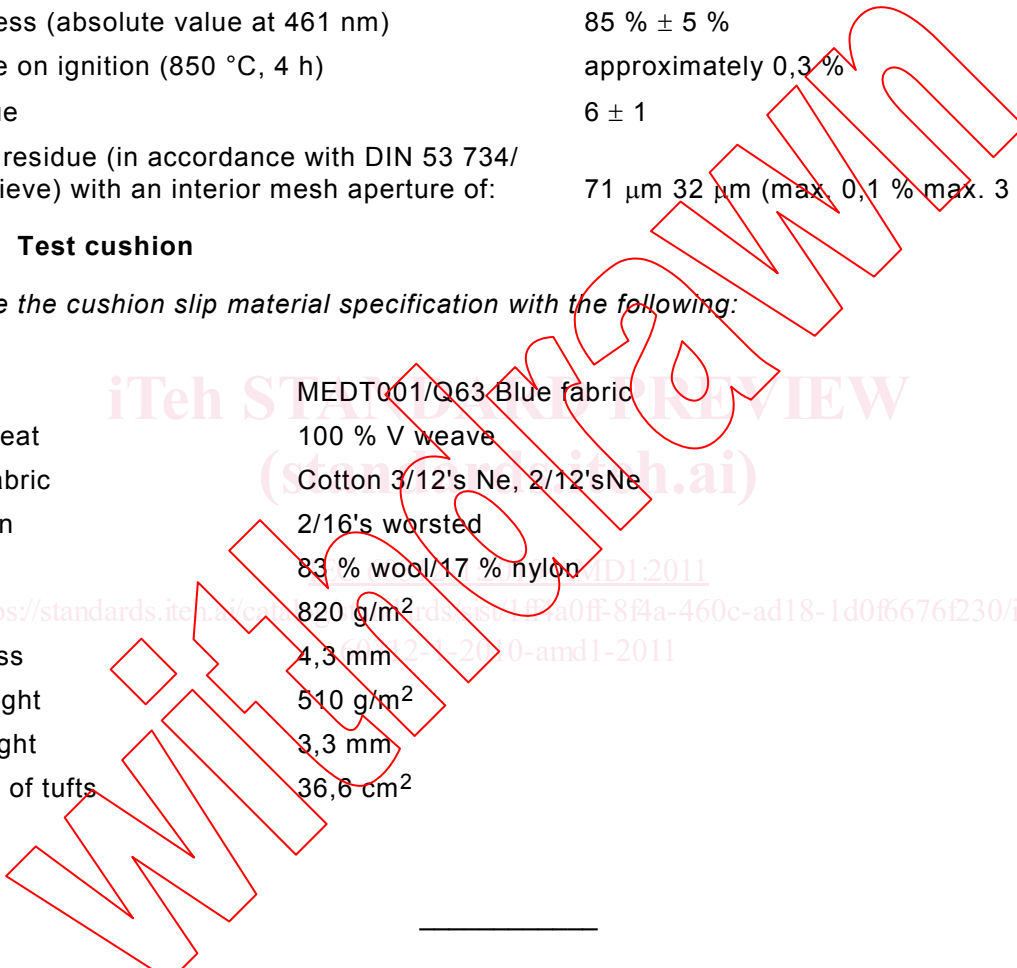
7.2.2.6 Cellulose dust

| | |
|---|-----------------------------------|
| Type | highly pure cellulose |
| Characteristic | microfibre, white |
| Cellulose content | approximately 99,5 % |
| Average fibre length | 30 µm |
| Average fibre thickness | 18 µm |
| Bulk density | 200 g/l – 260 g/l |
| Whiteness (absolute value at 461 nm) | 85 % ± 5 % |
| Residue on ignition (850 °C, 4 h) | approximately 0,3 % |
| pH-value | 6 ± 1 |
| Screen residue (in accordance with DIN 53 734/air jet sieve) with an interior mesh aperture of: | 71 µm 32 µm (max. 0,1 % max. 3 %) |

7.2.6 Test cushion

Replace the cushion slip material specification with the following:

| | |
|-----------------|----------------------------|
| type | MEDT001/Q63 Blue fabric |
| pile repeat | 100 % V weave |
| basic fabric | Cotton 3/12's Ne, 2/12'sNe |
| pile yarn | 2/16's worsted |
| | 83 % wool/17 % nylon |
| weight | 820 g/m ² |
| thickness | 4,3 mm |
| pile weight | 510 g/m ² |
| pile height | 3,3 mm |
| number of tufts | 36,6 cm ² |



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