PD IEC TS 62885-1:2020

BSI Standards Publication

Surface cleaning appliances

Part 1: General requirements on test material and test equipment

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

National foreword

This Published Document is the UK implementation of IEC TS 62885-1:2020. It supersedes PD IEC TS 62885-1:2018, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CPL/59/6, Floor treatment appliances.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 05125 4

ICS 97.080

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 November 2020.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

IEC TS 62885-1

Edition 3.0 2020-10

TECHNICAL SPECIFICATION

colour inside

Surface cleaning appliances –
Part 1: General requirements on test material and test equipment

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 97.080

ISBN 978-2-8322-8856-6

Warning! Make sure that you obtained this publication from an authorized distributor.

Documents
Document Sharing Hub

® Registered trademark of the International Electrotechnical Commission

Full document details: PD IEC TS 62885-1:2020

CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 8
4 Carpet construction specification 8
4.1 General 8
4.2 Construction verification 10
4.2.1 General 10
4.2.2 Performance verification 11
4.3 Pre-treatment of new and replacement carpets for testing 11
4.3.1 General 11
4.3.2 Pre-treatment of new Wilton test carpets for dust removal testing 11
4.3.3 Verification of replacement carpets for dust removal testing 11
4.4 Pre-treatment of new carpets for the determination of airborne acoustical noise 11
5 Standard test dusts 12
5.1 Simulated household dust 12
5.1.1 Background 12
5.1.2 Composition of the simulated household dust 12
5.1.3 Components 13
5.1.4 Mixing of simulated household dust 15
5.2 Mineral dust 17
5.2.1 Mineral dust – Type 1 17
5.2.2 Mineral dust – Type 2 18
5.3 Debris 18
5.3.1 Background 18
5.3.2 Medium size debris 19
5.3.3 Large debris 19
Annex A (informative) Information on supplier of test materials and details of test equipment 21
Annex B (informative) Initial production run of the BIC4 Wilton test carpet 22
Annex C (informative) Determination of carpet pile direction 23
Annex D (informative) Categories of dry vacuum cleaners 24
D.1 General 24
D.2 Vacuum categories 24
D.2.1 Upright vacuum cleaner 24
D.2.2 Canister (cylinder) vacuum cleaner 24
D.2.3 Stick (handstick) vacuum cleaner 25
D.2.4 Hand-held vacuum cleaner 25
D.2.5 Robotic vacuum cleaner 26
Bibliography 27

Figure 1 – Real household dust (left) and simulated household dust (right) 12
Figure 2 – Ready mixed simulated household dust 13

AVA Documents
Document Sharing Hub

Figure 3 – Tumbler mixer (Source: www.fuchsag.com) 16
Figure 4 – Order of sampling (star-shaped) 16
Figure 5 – Sampling of simulated household dust 17
Figure 6 – Comparison between non-organic and organic medium size debris 19
Figure 7 – Comparison between non-organic and organic large debris 20
Figure C.1 – Looking against pile direction 23
Figure C.2 – Looking with pile direction 23
Figure D.1 – Upright Cleaner 24
Figure D.2 – Canister vacuum cleaner 25
Figure D.3 – Stick vacuum cleaner 25
Figure D.4 – Hand-held vacuum cleaner 26
Figure D.5 – Robotic vacuum cleaner 26

Table 1 – Wilton test carpet construction specifications 9
Table 2 – Level loop test carpet construction specifications 10
Table 3 – Grain size distribution: Type 3 mineral dust 14
Table 4 – Cellulose dust fibre size distribution 14
Table 5 – Cotton linters characteristics 15
Table 6 – Grain size distribution: Type 1 mineral dust 18
Table 7 – Grain size distribution: Type 2 mineral dust 18
Table 8 – Specifications of nuts and set crews 19
Table 9 – Specification of cap nuts 20
Table B.1 – Test results for BIC4 Wilton test carpets 22

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SURFACE CLEANING APPLIANCES –

Part 1: General requirements on test material and test equipment

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 62885-1, which is a technical specification, has been prepared by subcommittee 59F: Surface cleaning appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This third edition cancels and replaces the second edition published in 2016. This edition constitutes a technical revision.

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

This edition includes the following significant technical change with respect to the previous edition:

a) Clauses 4 and 5 on test carpets have been combined into the new Clause 4;

b) a new Clause 5 has been added containing specifications and treatment of various kinds of test dust;

c) a level loop test carpet specification has been added.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
59F/390/DTS	59F/402/RVDTS

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 62885 series, under the general title *Surface cleaning appliances*, can be found on the IEC website.

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

INTRODUCTION

IEC subcommittee 59F has agreed to make a collection of test material and test equipment used in standards for testing surface cleaning appliances and to publish this collection as a technical specification. The existing annexes published on the IEC web will be integrated in this technical specification step by step.

Regular maintenance of the technical specification ensures that other standards which refer to this TS always reference the current status regarding test material and test equipment.

This third edition complements the specification of the Wilton test carpet in the second edition with the specification of a level loop test carpet and information on pre-treatment of test carpets.

Furthermore, the specification of various types of test dust has been included. Further test material and test equipment specifications will follow.

The intention with this document is to ensure a minimum of test material types and common use of these materials in tests of various surface cleaning appliances.

For information on supplies of test materials and details of test equipment, see Annex A.

Annex D provides general information relative to the various categories of dry vacuum cleaners.

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020

SURFACE CLEANING APPLIANCES –

Part 1: General requirements on test material and test equipment

1 Scope

This part of IEC 62885 specifies the physical characteristics of test equipment and material used in tests common to several products covered by the IEC 62885 series for surface cleaning appliances. In addition, it provides guidance regarding the evaluation of Wilton and other types of carpets to determine their acceptability for testing and pre-treatment of test dust.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62885-2:–[1], *Surface cleaning appliances – Part 2: Dry vacuum cleaners for household or similar use – Methods for measuring the performance*

ISO 1763, *Textile floor coverings – Determination of number of tufts and/or loops per unit length and per unit area*

ISO 1765, *Machine-made textile floor coverings – Determination of thickness*

ISO 1766, *Textile floor coverings – Determination of thickness of pile above the substrate*

ISO 1833-1, *Textiles – Quantitative chemical analysis – General principles of testing*

ISO 2060, *Textiles – Yarn from packages – Determination of linear density (mass per unit length) by the skein method*

ISO 2061, *Textiles – Determination of twist in yarns – Direct counting method*

ISO 2424, *Textile floor coverings – Vocabulary*

ISO 4032, *Hexagon nuts (style 1) – Product grades A and B*

ISO 4766, *Slotted set screws with flat point*

ISO 6989, *Textile fibres – Determination of length and length distribution of staple fibres (by measurement of single fibres)*

ISO 8543, *Textile floor coverings – Methods for determination of mass*

ISO 13320, *Particle size analysis — Laser diffraction methods*

[1] Under preparation. Stage at the time of publication: IEC AFDIS 62885-2:2020.

Documents
Document Sharing Hub

Full document details: PD IEC TS 62885-1:2020