

Cigarettes — Determination of ventilation — Definitions and measurement principles

ICS 65.160

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National foreword

This British Standard reproduces verbatim ISO 9512:2002 and implements it as the UK national standard. It supersedes BS 5381-6:1993 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AW/40, Tobacco and tobacco products, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Cigarettes — Determination of ventilation — Definitions and measurement principles

*Cigarettes — Détermination du taux de ventilation — Définitions et
principes de mesurage*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9512 was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*, Subcommittee SC 1, *Physical and dimensional tests*.

This second edition cancels and replaces the first edition (ISO 9512:1993), which has been technically revised.

Annexes A and B form a normative part of this International Standard. Annexes C to E are for information only.

This corrected version of ISO 9512:2002 incorporates the following corrections. Figures 1 b) and d) have been corrected and a few minor editorial changes have been made.

Cigarettes — Determination of ventilation — Definitions and measurement principles

1 Scope

This International Standard specifies a method for the determination of ventilation which is applicable to cigarettes.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3308, *Routine analytical cigarette-smoking machine — Definitions and standard conditions*

ISO 3402, *Tobacco and tobacco products — Atmosphere for conditioning and testing*

ISO 6565, *Tobacco and tobacco products — Draw resistance of cigarettes and pressure drop of filter rods — Standard conditions and measurement*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1 ventilation

aspiration of atmospheric air into an unlit cigarette other than through its front area

NOTE Dilution is the effect of ventilation on the smoke concentration.

3.2 front area

that end of a cigarette which is intended to be lit

3.3 total airflow

100 % of the volumetric airflow leaving the mouth end of an unlit cigarette which is encapsulated in a measurement device having an insertion depth as defined in ISO 3308

NOTE Under standard test conditions, the total airflow, Q , is 17,5 ml/s.

3.4 generator for total airflow

device to maintain a constant total airflow at the exit of the mouth end of a cigarette when encapsulated in a measurement head having an insertion depth as defined in ISO 3308

3.5

ventilation airflow

volumetric airflow entering an unlit cigarette other than through the front area of the cigarette

NOTE The ventilation airflow is standardized to the negative pressure at the mouth end of the cigarette, created by the draw resistance of the cigarette when encapsulated in a measurement device having an insertion depth as defined in ISO 3308.

3.6

total ventilation

total amount of lateral air entering the cigarette (other than through its front area) when encapsulated in a measurement device having an insertion depth as defined in ISO 3308

3.7

degree of ventilation

ratio, expressed as a percentage, of the ventilation airflow to the total airflow

See Figures 1 b), 1 c) and 1 d).

3.8

components of total ventilation

that air entering through the cigarette paper, and through the materials comprising and attaching the filter to the tobacco rod, contributing to total ventilation

See Figures 1 b), 1 c) and 1 d).

3.9

filter ventilation

that air entering the cigarette through the filter joining paper (tipping paper) between the covered part of the mouth end and the beginning of the tobacco rod

See Figure 1 b).

3.10

paper ventilation

that air entering the cigarette through the envelope covering the whole length of the tobacco rod

See Figure 1 b).

3.11

butt ventilation

that air entering the cigarette between the covered part of the mouth end of the cigarette and the position defined by the butt length appropriate to the cigarette

See Figure 1 c).

3.12

burnable tobacco rod ventilation

that air entering the cigarette through its paper between the position defined by the butt length appropriate to the cigarette and the end of the cigarette which would be lit

See Figure 1 c).

3.13

tipping-paper ventilation

that air entering the cigarette through the filter joining paper (tipping paper) between the covered part of the mouth end and the tobacco rod end of the tipping paper

See Figure 1 d).