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Requirements and test methods for electronic cigarette devices

Exigences et méthodes d'essai relatives aux cigarettes électroniques

Anforderungen und Prüfverfahren für elektronische Zigarettengeräte

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European foreword

This document (CEN/TS 17287:2019) has been prepared by Technical Committee CEN/TC 437 "Electronic cigarettes and e-liquids", the secretariat of which is held by AFNOR.

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Introduction

Electronic cigarettes, also called e-cigarettes, electronic cigarette devices or electronic nicotine vapor delivery systems are usually battery-operated devices that people use to inhale an aerosol, which typically contains nicotine (though not always), flavourings, and other chemicals. The vapor is generated by heating a fluid often called e-liquid.

This document offers definitions, recommendation, references to other existing standards as well as best practice solutions like test methods to minimize the risk for the consumer using e-cigarette devices. Where no reference methods or standards could be identified, it is essential to further investigate the need for the development of such methods.

The recommendations given in this document are relevant to all the various product types currently available, as well as to those that will be developed. Not all elements of these recommendations will apply to every type of product, but the definitions may be used to identify recommendations for specific products, or parts of products, within this diverse sector.

In the absence of national regulations this standard can provide state of the art guidance for safe e-cigarettes and e-liquids.

1 Scope

This document is applicable to electronic cigarettes and similar vapour producing devices intended for the production of aerosol from e-liquids for consumption by inhalation. It is applicable to devices intended for use with or without nicotine content in the aerosol produced. This standard is also applicable to e-liquid containers, filling mechanisms and accessories, electrical and other, intended for use with electronic cigarettes and similar vapour producing devices.

This standard specifies the minimum safety and technical requirements for electronic cigarette devices, e-liquid containers, and associated accessories when operated and maintained in the manner prescribed by the manufacturer.

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.

EN 862, *Packaging — Child-resistant packaging — Requirements and testing procedures for non-reclosable packages for non-pharmaceutical products*

EN 1186 (all parts), *Materials and articles in contact with foodstuffs — Plastics*

EN 14401, *Rigid plastics containers — Methods to test the effectiveness of closures*

EN 50581, *Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

EN 55014 (all parts), *Electromagnetic compatibility — Requirements for household appliances, electronic tools and similar apparatus*

EN 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1)*

EN 60335-2-29, *Household and similar electrical appliances — Safety — Part 2-29: Particular requirements for battery chargers (IEC 60335-2-29)*

EN 60950-1, *Information technology equipment — Safety — Part 1: General requirements (IEC 60950-1)*

EN 61000-3-2, *Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2)*

EN 61000-3-3, *Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection (IEC 61000-3-3)*

EN 61558-1, *Safety of power transformers, power supplies, reactors and similar products — Part 1: General requirements and tests (IEC 61558-1)*

EN 61558-2-16, *Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V — Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units (IEC 61558-2-16)*

EN 62133, *Secondary cells and batteries containing alkaline or other non-acid electrolytes — Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications (IEC 62133)*

EN 62233, *Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure (IEC 62233)*

EN 62680-3, *Universal serial bus interfaces for data and power — Part 3: USB battery charging specification, Revision 1.2 (IEC 62680-3)*

EN 82079-1, *Preparation of instructions for use — Structuring, content and presentation — Part 1: General principles and detailed requirements (IEC 82079-1)*

EN ISO 8317, *Child-resistant packaging — Requirements and testing procedures for reclosable packages (ISO 8317)*

ISO 28219, *Packaging — Labelling and direct product marking with linear bar code and two-dimensional symbols*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
electronic cigarette
e-cigarette
electronic cigarette device
e-cigarette device
product, that vaporises e-liquid to generate an inhalable aerosol carried by air drawn through the device by the user

Note 1 to entry: Electronic cigarette is also referred to as e-cig, vapour product, personal vaporiser or ENDS/ENNDS.

Note 2 to entry: Electronic cigarette differs from tobacco products in that they do not contain tobacco.

3.2
e-liquid container
bottle or container which contains the e-liquid for filling the e-liquid reservoir

3.3
e-liquid
base liquid, which may or may not contain nicotine and/or additives, intended for transformation into an aerosol by an electronic cigarette

3.4
power unit
unit providing electrical power to the atomizer, usually containing battery and electronic control unit