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## Lighters — Safety specifications

*Briquets — Spécifications de sécurité*



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ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

This fifth edition cancels and replaces the fourth edition (ISO 9994:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Clause 2](#), [3.22](#), [3.23](#), [subclause 4.2.2.4](#), [subclause 4.2.3](#), [subclause 4.2.4](#), [subclause 4.7](#), [subclause 6.1.2](#), [subclause 6.11.2.2.9](#) and [subclause 6.11.2.2.10](#) have been added.
- term number [3.6](#), [subclause 4.2.2.3](#), [subclause 4.5](#), [subclause 5.1](#), [subclause 5.7](#), [Figure 4](#), [subclause 6.3.2.7](#), [subclause 6.7.4](#), [subclause 6.9.3.3](#), [subclause 6.10.4](#), [subclause 6.12.3](#), [subclause 7.3.1](#), [subclause 7.4](#), [Figure 5](#), [Figure 7](#) and [Annex A](#) have been modified.
- Bibliography has been deleted.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Lighters, being flame-producing devices, can, as do all flame sources, present a potential hazard to users. The safety specifications given in this document cannot eliminate all hazards, but are intended to reduce potential hazards to users.

This document is intended to be revised periodically to consider flame height reduction for the various technologies in line with technological progress.

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# Lighters — Safety specifications

**WARNING** — Persons using this document should be familiar with normal laboratory practice, if applicable. This document does not purport to address all the safety concerns, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to determine the applicability of any other restrictions.

## 1 Scope

This document specifies requirements for lighters to ensure a reasonable degree of safety for normal use or reasonably foreseeable misuse of such lighters by users.

This document applies to all flame-producing products commonly known as cigarette lighters, cigar lighters and pipe lighters.

It does not apply to matches and flame-producing products intended solely for igniting materials other than cigarettes, cigars, and pipes.

## 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.

ISO 7941, *Commercial propane and butane — Analysis by gas chromatography*

UL 1439, *Tests for Sharpness of Edges on Equipment*

## 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:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### **lighter**

manually operated flame-producing device, employing a petrochemical derivative as a fuel, normally used for deliberately igniting cigarettes, cigars and pipes, and which might foreseeably be used to *ignite* (3.21) materials such as paper, wicks, candles and lanterns

Note 1 to entry: Lighters are specifically not intended for use as candles or as flashlights, or for other uses requiring an extended burn time.

### 3.2

#### **fluid lighter**

*lighter* (3.1), with an exposed wick, that employs as fuel liquid hydrocarbons such as hexane whose gauge vapour pressure at 24 °C does not exceed 34,5 kPa

### 3.3

#### **gas lighter**

*lighter* (3.1) that employs as fuel liquefied hydrocarbons such as *n*-butane, isobutane and propane whose gauge vapour pressure at 24 °C exceeds 104 kPa