

# TECHNICAL SPECIFICATION

BASIC SAFETY PUBLICATION

**Fire hazard testing –  
Part 11-40: Test flames – Confirmatory tests – Guidance**





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**Fire hazard testing –  
Part 11-40: Test flames – Confirmatory tests – Guidance**

INTERNATIONAL  
ELECTROTECHNICAL  
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## FIRE HAZARD TESTING –

**Part 11-40: Test flames –  
Confirmatory tests – Guidance**

## FOREWORD

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IEC TS 60695-11-40 has been prepared by IEC technical committee 89: Fire hazard testing. It is a Technical Specification.

It has the status of a basic safety publication in accordance with IEC Guide 104 and ISO/IEC Guide 51.

The text of this Technical Specification is based on the following documents:

DTS	Report on voting
89/1498/DTS	89/1512/RVDTS

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

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

This second edition cancels and replaces the first edition published in 2002. This edition constitutes a technical revision.

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

- a) former Clause 4 split into updated/rearranged new Clause 4 and Clause 5;
- b) Table 1 updated and moved to new Clause 4;
- c) former Clause 5 transformed to Clause 6;
- d) former Clause 6 transformed to Clause 7;
- e) former Clause 7, Clause 8 and Clause 9 combined into an updated/rearranged new Annex A; and
- f) all figures were updated.

This Technical Specification is to be used in conjunction with IEC 60695-11-2, IEC 60695-11-3, IEC 60695-11-4 and IEC 60695-11-5.

A list of all the parts in the IEC 60695 series, under the general title *Fire hazard testing*, can be found on the IEC website.

Part 11 consists of the following parts:

- Part 11-2: Test flames – 1 kW nominal pre-mixed flame – Apparatus, confirmatory test arrangement and guidance
- Part 11-3: Test flames – 500 W flames – Apparatus and confirmational test methods
- Part 11-4: Test flames – 50 W flame – Apparatus and confirmational test method
- Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance
- Part 11-10: Test flames – 50 W horizontal and vertical flame test methods
- Part 11-11: Test flames – Determination of the characteristic heat flux for ignition from a non-contacting flame source
- Part 11-20: Test flames – 500 W flame test methods
- Part 11-30: Test flames – History and development from 1979 to 1999
- Part 11-40: Test flames – Confirmatory tests – Guidance

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](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.

## INTRODUCTION

Standard flames are specified for various small-scale fire tests. Apparatus design and test parameters are specified in an effort to ensure consistent and defined flames. Burner designs, material specifications and fuel and air specifications are typical necessary parameters. Experience has shown that the quality of the flames and the resulting test measurements are influenced significantly by subtle variations in the equipment and test technique. Simple checks on flame qualities, such as flame colour and dimensions, or the melting characteristics of silver wire, are also sometimes specified or recommended.

The need for a relatively simple check on the power of a flame has been recognized, leading to the introduction of confirmatory tests based on copper block calorimetry. This document is intended to provide information and guidance about small-scale standard flames and the various copper block confirmatory tests.