

Fire hazard testing —

Part 8-1: Heat release — General guidance

The European Standard EN 60695-8-1:2001 has the status of a British Standard

ICS 29.020; 13.220.99

National foreword

This British Standard is the official English language version of EN 60695-8-1:2001. It is identical with IEC 60695-8-1:2001.

The UK participation in its preparation was entrusted to Technical Committee GEL/89, Fire hazard testing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible 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.

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

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 13, an annex ZA page, an inside back cover and a back cover.

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Essais relatifs aux risques du feu
Part 8-1: Dégagement de chaleur -
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Prüfungen zur Beurteilung der
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Teil 8-1: Wärmeabgabe -
Allgemeiner Leitfaden
(IEC 60695-8-1:2001)

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Foreword

The text of document 89/426/FDIS, future edition 1 of IEC 60695-8-1, prepared by IEC TC 89, Fire hazard testing, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60695-8-1 on 2001-01-01.

This standard is to be used in conjunction with the Technical Specification IEC 60695-8-2.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2001-11-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2004-01-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative .
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60695-8-1:2001 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

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| IEC 60836 | NOTE: Harmonized as HD 565 S1:1993 (not modified). |
| IEC 61099 | NOTE: Harmonized as EN 61099:1992 (not modified). |
| IEC 60867 | NOTE: Harmonized as EN 60867:1994 (not modified). |
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INTRODUCTION

Fires are responsible for creating hazards to life and property as a result of the generation of heat (thermal hazard), toxic and/or corrosive compounds and obscuration of vision due to smoke. Fire risk increases as the heat released increases, possibly leading to a flash-over fire.

One of the most important measurements in fire testing is the measurement of heat release, and it is used as an important factor in the determination of fire hazard; it is also used as one of the parameters in fire safety engineering calculations.

The measurement and use of heat release data, together with other fire test data, can be used to reduce the likelihood of (or the effects of) fire, even in the event of foreseeable abnormal use, malfunction or failure of electrotechnical products.

When a material is heated by some external source, fire effluent can be generated and can form a mixture with air which can ignite and initiate a fire. The heat released in the process is carried away by the fire effluent-air mixture, radiatively lost or transferred back to the solid material, to generate further pyrolysis products, thus continuing the process.

Heat may also be transferred to other nearby products, which may burn, and then release additional heat and fire effluent.

The rate at which calorific (thermal) energy is released in a fire is defined as the heat release rate. Heat release rate is important because of its influence on flame spread and on the initiation of secondary fires. Other characteristics are also important, such as ignitability, flame spread and the side-effects of the fire (see the IEC 60695 series of standards).