

Plastics — Guidance for the use of standard fire tests

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National foreword

This British Standard reproduces verbatim ISO 10840:2003 and implements it as the UK national standard. It supersedes BS ISO TR 10840:1993 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/26, Burning behaviour of rubbers and plastics, 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.

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Plastics — Guidance for the use of standard fire tests

*Plastiques — Lignes directrices pour l'utilisation d'essais au feu
normalisés*



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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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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 10840 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

This first edition of ISO 10840 cancels and replaces ISO/TR 10840:1993, which has been technically revised.

Introduction

Many of the current reaction-to-fire tests were developed, prior to the widespread use of synthetic polymers, to assess products incorporating materials such as wood (in the building industry), paper (in electrical wires and cables), and naturally occurring fibres such as cotton, wool and horsehair (in many textile, furniture and electrical applications). The “reaction-to-fire” characteristics of these “traditional” or “older-generation” materials are often very different from those of synthetic materials, especially thermoplastics.

ISO/TC 61/SC 4 has, for a number of years, recognized the need for guidance for users of fire-test standards commonly applied to materials and products made of, or incorporating, plastics. During 1997, it decided to develop a guidance document in the form of an International Standard using ISO/TR 10840, and particularly its Annex A, as the basis.

Annex A of ISO/TR 10840:1993 listed a series of potential problems associated with the reaction-to-fire testing of plastics materials and products. However, it provided users of the test methods with no practical assistance on how to cope with the difficulties listed.

