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Irish Standard
I.S. EN ISO 25762:2012

Plastics - Guidance on the assessment of the fire characteristics and fire performance of fibre-reinforced polymer composites (ISO 25762:2009)

I.S. EN ISO 25762:2012

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English Version

**Plastics - Guidance on the assessment of the fire characteristics
and fire performance of fibre-reinforced polymer composites
(ISO 25762:2009)**

Plastiques - Lignes directrices pour l'évaluation des
caractéristiques au feu et des performances au feu de
composites polymères renforcés de fibres (ISO
25762:2009)

Kunststoffe - Anleitung für die Bewertung der
Eigenschaften und des Verhaltens von faserverstärkten
Polymerverbundstoffen bei Brandeinwirkung (ISO
25762:2009)

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Foreword

The text of ISO 25762:2009 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 25762:2012 by Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2012, and conflicting national standards shall be withdrawn at the latest by July 2012.

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I.S. EN ISO 25762:2012
**INTERNATIONAL
STANDARD**

**ISO
25762**

First edition
2009-07-01

**Plastics — Guidance on the assessment
of the fire characteristics and fire
performance of fibre-reinforced polymer
composites**

*Plastiques — Lignes directrices pour l'évaluation des caractéristiques
au feu et des performances au feu de polymères composites renforcés
de fibres*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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 25762 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 4, *Burning behaviour*.

Introduction

The information given in this International Standard is in accordance with the principles recommended in ISO 10840 which was established to develop a general policy and philosophy for the development and use of fire tests for plastics.

Fibre-reinforced polymer (FRP) composites are produced in a wide variety of chemical and physical forms, some of which cause difficulties for fire laboratories since the specimens required for some tests are not representative of the FRP composite in its end-use configuration.

This International Standard identifies those tests which can be used for determining the fire characteristics of various FRP composites and provides guidance on how to assess the fire performance of FRP composites in different applications. Since FRP composites can be used as lightweight construction materials, the experience of users in transport applications has been valuable in the preparation of this International Standard. Test data from methods that are specified by regulators of marine and rail products have been provided to exemplify the fire performance of some FRP composites.

Plastics — Guidance on the assessment of the fire characteristics and fire performance of fibre-reinforced polymer composites

1 Scope

This International Standard gives guidelines for the assessment of the fire characteristics and fire performance of fibre-reinforced polymer (FRP) composites, particularly in structural applications in buildings and transport.

It is applicable to FRP composites prepared from thermosetting or thermoplastic resins and reinforced with inorganic fibres greater than 7,5 mm in length.

This International Standard gives guidelines on:

- the applicability of product types (e.g. sheets, laminates, profiled sections and some sandwich constructions) to end-use performance;
- the test methods and performance criteria for different physical forms of FRP test specimen.

NOTE 1 FRP composites vary widely in their physical form (e.g. in thickness, density and shape).

NOTE 2 FRP composites can also be assembled products containing other materials (such as metals or inorganic non-fibrous fillers) and as systems containing air-gaps, joints and fixing attachments.

NOTE 3 Handling and storage recommendations for the fire safety management of FRP composites are given in Annex C. In addition, some guidance on how to tackle fires involving FRP composites is provided in Annex D.

2 Normative references

The following referenced documents are indispensable for the application 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 472, *Plastics — Vocabulary*

ISO 13943, *Fire safety — Vocabulary*

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