This is a free page sample. Access the full version online.



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)

© NSAI 2012 No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:				
<i>This document is based oi</i> EN ISO 25762:2012	n: Published: 9 February, 2012			
This document was publis under the authority of the and comes into effect on: 9 February, 2012	shed • NSAI		ICS number: 13.220.40 83.080.01	
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie		
Údarás um Chaighdeáin Náisiúnta na hÉireann				

EUROPEAN STANDARD

EN ISO 25762

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2012

ICS 13.220.40; 83.080.01

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)

This European Standard was approved by CEN on 24 December 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 25762:2012 (E)

Contents

Page

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 25762:2009 has been approved by CEN as a EN ISO 25762:2012 without any modification.

This page is intentionally left BLANK.



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



Reference number ISO 25762:2009(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Contents

Forewo	ordi	v
Introdu	iction	v
1	Scone	1
•		Ì
2	Normative references	1
3	Terms, definitions and abbreviated terms	2
3.1	General	2
3.2	Types of material	3
4	Fibre reinforcement	4
4.1	Form	4
4.2	Core materials	4 4
4.4	Production methods	4
5	Fire characteristics	5
5 5.1	Reaction to fire	5
5.1.1	General	5
5.1.2	Combustibility	5
5.1.3	Ignitability	5
5.1.4	Rate of heat release	5
5.1.5	Flame spread	5
5.1.0	Smoke	0
5.2	Structural performance	6
5.2.1	General	6
5.2.2	Walls and ceilings	7
5.2.3	Floors	7
5.2.4	Structural integrity of fibre-reinforced composites on exposure to fire	7
6	Fire test methods	8
6.1	Assessment of fire hazard	8
6.2	Fire tests for determining performance requirements	8
6.3	Applicability of standard fire test methods to FRP composites	8 0
6.5	Standard fire tests for conformity purposes	9 9
0.0		
Annex	A (informative) Heat release measurements on FRP composites	0
Annex	B (informative) Typical results given for glass-fibre-reinforced polymer composites by ISO and EN fire test methods	2
Annex	C (informative) Recommendations for the handling and storage of fibre-reinforced polymer composites	:0
Annex	D (informative) Procedure in the event of fire involving fibre-reinforced polymer composites	2
Annex	E (informative) Mounting and fixing of test specimens of fibre-reinforced polymer composites	3
Bibliod	Iraphy	7

ISO 25762:2009(E)

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.

This is a free page sample. Access the full version online.

I.S. EN ISO 25762:2012

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 nonfibrous 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*



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation