Irish Standard
I.S. EN 2824:2011

Aerospace series - Burning behaviour of non-metallic materials under the influence of radiating heat and flames - Determination of smoke density and gas components in the smoke of materials - Test equipment apparatus and media

I.S. EN 2824:2011

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English Version

Aerospace series - Burning behaviour of non-metallic materials under the influence of radiating heat and flames - Determination of smoke density and gas components in the smoke of materials - Test equipment apparatus and media

Série aérospatiale - Comportement au feu des matériaux non-métalliques sous l'action de chaleur rayonnante et de flammes - Détermination de la densité de fumée et des composants des gaz de fumée des matériaux - Équipement, appareils et moyens d'essai

Luft- und Raumfahrt - Brandverhalten nichtmetallischer Werkstoffe unter Einwirkung von strahlender Wärme und Flammen - Bestimmung der Rauchdichte und der Rauchgaskomponenten von Werkstoffen - Prüfeinrichtung Prüfgeräte und Prüfmittel

This European Standard was approved by CEN on 12 February 2011.

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

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Contents

Page

Foreword

This document (EN 2824:2011) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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of an identical text or by endorsement, at the latest by May 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.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 and the United Kingdom.

1 Scope

This European Standard defines the test equipment, apparatus and media required for determination of the smoke density according to EN 2825 and the concentration of the gas components in the smoke according to EN 2826 due to pyrolitic decomposition of solid materials and composite materials of up to 25 mm in thickness under the influence of radiant heat only or with simultaneous flame application.

This test method applies exclusively to materials whose specific standard requires this type of test. It cannot be substituted for the statutory tests required for a final specific use of the material concerned.

NOTE The smoke gas density and the gas components in the smoke are determined according to the specific environmental and test conditions defined in this standard, in EN 2825 and EN 2826. No studies have been made up to now to determine whether the results can be transferred to differing conditions, particularly to actual fire conditions. The inhalatory toxical risk and irritancy affect cannot be assessed by merely measuring the concentration of individual gas components in the smoke.

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.

EN 2743, *Aerospace series — Fibre reinforced plastics — Standard procedures for conditioning prior to testing unaged materials*

EN 2825, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of smoke density*

EN 2826, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of gas components in the smoke*

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 2768-2, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications*

3 Apparatus

3.1 General

The test equipment comprises the test chamber described in 3.2, incorporating the devices specified in 3.3 to 3.9, as well as the ancillary equipment as detailed in 3.10 to 3.17.