



**NSAI**  
Standards

Irish Standard  
I.S. EN 4708-108:2019

Aerospace series - Sleeving, heat-shrinkable, for binding, insulation and identification - Part 108: Limited fire hazard sleeving - Operating temperatures - 65 °C to 150 °C - Product standard

**I.S. EN 4708-108:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 4708-108:2019 is the adopted Irish version of the European Document EN 4708-108:2019, Aerospace series - Sleeving, heat-shrinkable, for binding, insulation and identification - Part 108: Limited fire hazard sleeving - Operating temperatures - 65 °C to 150 °C - Product standard

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EUROPEAN STANDARD

**EN 4708-108**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 49.060

English Version

**Aerospace series - Sleeving, heat-shrinkable, for binding,  
insulation and identification - Part 108: Limited fire hazard  
sleeving - Operating temperatures - 65 °C to 150 °C -  
Product standard**

Série aéronautique - Manchons thermorétractables, de  
jonction, isolement et identification - Partie 108 :  
Risque d'incendie limité - Températures d'utilisation -  
65 °C à 150 °C - Norme de produit

Luft- und Raumfahrt - Wärmeschrumpfender Schlauch  
zur Befestigung, Isolierung und Identifizierung - Teil  
108: Begrenzte Brandgefahr - Temperaturbereich - 65  
°C und 150 °C - Produktnorm

This European Standard was approved by CEN on 14 July 2019.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## **European foreword**

This document (EN 4708-108:2019) 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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

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**EN 4708-108:2019 (E)****1 Scope**

This document specifies the required characteristics for four types of heat-shrinkable limited fire hazard sleeveings for use in aircraft electrical systems at operating temperatures between – 65 °C and 150 °C.

This sleeving is flexible, flame retarded and emits minimum smoke, gases and corrosive by-products when exposed to fire. It is available with various wall thicknesses and also in a higher shrink ratio according to the application and degree of mechanical protection required. It is suitable for use (e.g. as cable protection) in areas where smoke, gases or corrosive by-products would constitute a particular hazard.

Type A: Medium wall, shrink ratio 2:1 and is normally supplied with internal diameters up to 30 mm.

The standard colour is black.

Sizes or colours other than those specifically listed in this document may be available. These items shall be considered to comply with this document if they comply with the property requirements listed in Table 2 except for dimensions and mass.

**2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3909, *Aerospace series — Test fluids and test methods for electrical and optical components and sub-assemblies*

EN 4708-001, *Aerospace series — Sleeving, heat-shrinkable, for binding, insulation and identification — Part 001: Technical specification*<sup>1)</sup>

EN 60684-1, *Flexible insulating sleeving — Part 1: Definitions and general requirements* (IEC 60684-1)

EN 60684-2, *Flexible insulating sleeving — Part 2: Methods of test* (IEC 60684-2)

IEC 60757, *Code for designation of colours*<sup>2)</sup>

EN ISO 846, *Plastics — Evaluation of the action of micro-organisms* (ISO 846)

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

MIL-PRF-87937, *Performance specification: Cleaning compound, aerospace equipment*<sup>3)</sup>

AMS 1428, *Fluid, Aircraft Deicing/Anti-Icing, Non Newtonian (Pseudoplastic), SAE Types II, III, and IV*<sup>4)</sup>

AMS 1476, *Deodorant, aircraft toilet*<sup>4)</sup>

ASTM D740, *Standard Specification for Methyl Ethyl Ketone*

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1) Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe — Standardization (ASD-STAN), <http://www.asd-stan.org/>

2) Published by: IEC International Electrotechnical Commission. <http://www.iec.ch/>

3) Published by: Department of Defense (DoD). <http://www.defenselink.mil/>

4) Published by: SAE National (US) Society of Automotive Engineers. <http://www.sae.org/>



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