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**Aeronavtika - Toplotno skrčljiva cev za utrjevanje, izolacijo in identifikacijo - 204.  
del: Z izboljšanimi identifikacijskimi protipožarnimi lastnostmi - Območje delovne  
temperature med  $-40\text{ }^{\circ}\text{C}$  in  $105\text{ }^{\circ}\text{C}$  - Standard za proizvod**

Aerospace series - Sleeving, heat-shrinkable, for binding, insulation and identification -  
Part 204: Limited fire hazard identification sleeves - Operating Temperature range  $-40\text{ }^{\circ}\text{C}$   
to  $105\text{ }^{\circ}\text{C}$  - Product standard

Luft- und Raumfahrt - Wärmeschrumpfender Schlauch zur Identifizierung - Teil 204:  
Identifikation-Hülse begrenzt Brandverhalten - Temperaturbereich  $-40\text{ }^{\circ}\text{C}$  und  $105\text{ }^{\circ}\text{C}$  -  
Produktnormen

Série aérospatiale - Manchons thermorétractables, de jonction, isolement et identification  
- Partie 204 : Manchons d'identification à risque d'incendie limité - Températures  
d'utilisation  $-40\text{ }^{\circ}\text{C}$  à  $105\text{ }^{\circ}\text{C}$  - Norme de produit

<https://standards.iteh.ai/catalog/standards/sist/73c9aa1b-2f5c-49ef-9f25-305b64973ad2/sist-en-4708-204-2024>

**Ta slovenski standard je istoveten z: EN 4708-204:2023**

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**ICS:**

49.025.40	Guma in polimerni materiali	Rubber and plastics
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

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EUROPEAN STANDARD

EN 4708-204

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2023

ICS 49.060

English Version

**Aerospace series - Sleeving, heat-shrinkable, for binding,  
insulation and identification - Part 204: Limited fire hazard  
identification sleeves - Operating Temperature range -40  
°C to 105 °C - Product standard**

Série aérospatiale - Manchons thermorétractables, de  
jonction, isolement et identification - Partie 204 :  
Manchons d'identification à risque d'incendie limité -  
Températures d'utilisation -40 °C à 105 °C - Norme de  
produit

Luft- und Raumfahrt - Wärmeschrumpfender Schlauch  
zur Identifizierung - Teil 204: Identifikation-Hülse  
begrenzt Brandverhalten - Temperaturbereich -40 °C  
und 105 °C - Produktnormen

This European Standard was approved by CEN on 22 October 2023.

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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.

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

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<b>Contents</b>		<b>Page</b>
<b>European foreword .....</b>		<b>3</b>
<b>1</b>	<b>Scope.....</b>	<b>4</b>
<b>2</b>	<b>Normative references.....</b>	<b>4</b>
<b>3</b>	<b>Terms and definitions.....</b>	<b>5</b>
<b>4</b>	<b>Required characteristics.....</b>	<b>5</b>
<b>4.1</b>	<b>Dimensions and mass.....</b>	<b>5</b>
<b>4.2</b>	<b>Conditions of test .....</b>	<b>6</b>
<b>4.3</b>	<b>Tests.....</b>	<b>6</b>
<b>4.4</b>	<b>Resistance to fluids .....</b>	<b>9</b>
<b>5</b>	<b>Test report.....</b>	<b>10</b>
<b>6</b>	<b>Quality assurance .....</b>	<b>10</b>
<b>7</b>	<b>Designation .....</b>	<b>10</b>
<b>8</b>	<b>Labelling and packaging.....</b>	<b>10</b>
<b>9</b>	<b>Technical specification .....</b>	<b>10</b>

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## European foreword

This document (EN 4708-204:2023) 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 document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this document: 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, Türkiye and the United Kingdom.

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## EN 4708-204:2023 (E)

### 1 Scope

This document specifies the required characteristics for heat-shrinkable limited fire hazard identification sleeves for use in aircraft electrical systems at operating temperatures between  $-40\text{ °C}$  and  $105\text{ °C}$ .

This document is only applicable for the characterization of identification sleeves. This sleeving is flexible, flame retarded and emits minimum smoke, gases and corrosive by-products when exposed to fire. This sleeving is only applicable for use in areas where smoke, gases or corrosive by-products would constitute a particular hazard.

It is available with a shrink ratio of 2 : 1.

The product is normally supplied with internal diameters up to 51 mm.

The standard colours are white or yellow.

Sizes or colours other than those specifically listed in this document can be available. These items are considered to comply with this document if they comply with the property requirements listed in Table 2 and Table 3, except for dimensions and mass.

As the sleeving to be tested is a printed article, the complete system is to be recorded as part of the evaluation. The sleeve will only be considered as meeting the requirements of this document if printed with the printer, ribbon, inks and settings referenced within the test report.

Mark adherence and print permanence are determined in this specification using method EN 6059-407.

### 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 3909:2016, *Aerospace series — Test fluids and test methods for electrical and optical components and sub-assemblies*

EN 4708-001:2019, *Aerospace series — Sleeving, heat-shrinkable, for binding, insulation and identification — Part 001: Technical specification*

EN 6059-402, *Aerospace series — Electrical cables, installation — Protection sleeves — Test methods — Part 402: Bending properties*

EN 6059-407:2019, *Aerospace series — Electrical cables, installation — Protection sleeves — Test methods — Part 407: Mark adherence and print permanence*

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

EN 60684-2:2011, *Flexible insulating sleeving — Part 2: Methods of test*

EN IEC 60757, *Code for designation of colours*

ISO 846:2019, *Plastics — Evaluation of the action of microorganisms*

ISO 1817:2022, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*