

<b>STN</b>	<b>Letectvo a kozmonautika</b> <b>Teplom zmrastiteľné rúrky na viazanie, izoláciu a</b> <b>identifikáciu</b> <b>Časť 103: Fluóroelastomérové rúrky pre</b> <b>prevádzkové teploty od -55 °C do 200 °C</b> <b>Norma na výrobok</b>	<b>STN</b> <b>EN 4708-103</b>  31 1857
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Aerospace series - Sleeving, heat-shrinkable, for binding, insulation and identification - Part 103: Fluoroelastomer sleeves - Operating temperature -55 C to 200 C - Product standard

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/19

Obsahuje: EN 4708-103:2019

**129452**

EUROPEAN STANDARD

**EN 4708-103**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 49.060

English Version

**Aerospace series - Sleeving, heat-shrinkable, for binding,  
insulation and identification - Part 103: Fluoroelastomer  
sleeves - Operating temperature -55 °C to 200 °C - Product  
standard**

Série aérospatiale - Manchons thermorétractables, de  
jonction, isolement et identification - Partie 103:  
Gaines à base de fluoroélastomère - Températures  
d'utilisation -55 °C à 200 °C - Norme de produit

Luft- und Raumfahrt - Wärmeschrumpfender Schlauch  
zur Befestigung, Isolierung und Identifizierung - Teil  
103: Fluoropolymer Schlauch - Temperaturbereich -55  
°C und 200 °C - Produktnorm

This European Standard was approved by CEN on 6 August 2018.

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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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## **European foreword**

This document (EN 4708-103:2019) 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 November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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 European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**EN 4708-103:2019 (E)****1 Scope**

This document specifies the required characteristics for two types a heat-shrinkable, fluoroelastomer sleeving for use in aircraft electrical systems at operating temperatures between -55 °C and 200 °C.

Type A      Thick wall

Type B      Thin wall

This sleeving has good flexibility, is flame retarded and has a thick wall for mechanical protection. It is for use in areas subject to prolonged contamination by aircraft fuel and fluids with the exception of phosphate ester-based hydraulic fluids. The standard colour is black.

These sleeveings are normally supplied with internal diameters up to 50 mm for shrink ratios of 2:1. They are available in black only.

Sizes other than those specifically listed in this standard may be available. These items shall be considered to comply with this standard if they comply with the property requirements listed in Tables 2, 3 and 4 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*

EN ISO 846, *Plastics — Evaluation of the action of microorganisms*<sup>1)</sup>

EN ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*<sup>1)</sup>

IEC 60684-1, *Flexible insulating sleeving — Part 1: Definitions and general requirements*<sup>2)</sup>

IEC 60684-2, *Flexible insulating sleeving — Part 2: Methods of test*<sup>2)</sup>

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

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**

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1) Published by: International Organization for Standardization (ISO), <http://www.iso.org/>

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