ICS 49.090 SLOVENSKÁ TECHNICKÁ NORMA August 2025

STN	**Letectvo a kozmonautika Optické káble s vonkajším priemerom plášťa 125 µm Časť 103: Káble s polotuhou štruktúrou, so spevnenou konštrukciou, s vláknom GI 62,5 µm/125 µm s jedným jadrom, s vonkajším priemerom 2,74 mm Norma na výrobok**	**STN EN 4641-103** 31 1847

Aerospace series - Cables, optical 125 m diameter cladding - Part 103: Semi-loose, ruggedized simplex construction 62,5m125m GI fibre nominal 2,74 mm, outside diameter - 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. 07/25

Obsahuje: EN 4641-103:2025

Oznámením tejto normy sa ruší
STN EN 4641-103 (31 1847) z mája 2011

obsahuje farebné strany

140767

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4641-103

May 2025

ICS 49.090

Supersedes EN 4641-103:2010

English Version

Aerospace series - Cables, optical 125 µm diameter cladding - Part 103: Semi-loose, ruggedized simplex construction 62,5 µm/125 µm GI fibre nominal 2,74 mm, outside diameter - Product standard

Série aérospatiale - Câbles, optiques, diamètre extérieur de la gaine optique 125 µm - Partie 103 : Câble à structure semi-libre, renforcée, fibre simplex à gradient d'indice 62,5 µm/125 µm, diamètre extérieur 2,74 mm - Norme de produit

Luft- und Raumfahrt - Lichtwellenleiterkabel, Claddingdurchmesser 125 µm - Teil 103: Halbfester Leiteraufbau, widerstandsfähige Simplexkonstruktion GI 62,5 µm/125 µm Faser, Kabelaußendurchmesser 2,74 mm - Produktnorm

This European Standard was approved by CEN on 20 January 2025.

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, Türkiye and United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 4641-103:2025 E

Contents

Page

European foreword

This document EN 4641-103:2025 has been prepared by 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 November 2025, and conflicting national standards shall be withdrawn at the latest by November 2025.

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.

[This document supersedes EN 4641-103:2010.]

The main changes with respect to the previous edition are as follows:

— EN 4641-103 (P1), 11/2010 — Editorial improvements, update of Clause 2 and update of the scope to change “single mode fibre core” to “simplex fibre”.

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.

1 Scope

This document specifies the general characteristics, conditions for qualification, acceptance and quality assurance for a fibre optic cable with a 62,5 µm/125 µm simplex fibre, 2,74 mm outside cable diameter and of semi-loose construction. The basic construction is the cable specified in EN 4641-102 with added sheaths for ruggedized usages.

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 2424, *Aerospace series — Marking of aerospace products*

EN 2591-100, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General*

EN 2812, *Aerospace series — Stripping of electric cables*

EN 3745-100, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 100: General*

EN 3745-201, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 201: Visual examination*

EN 3745-203, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 203: Cable dimensions*

EN 3745-205, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 205: Cable longitudinal dimensional stability*

EN 3745-301, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 301: Attenuation*

EN 3745-306, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 306: Variation of attenuation during temperature cycling*

EN 3745-404, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 404: Thermal shock*

EN 3745-406, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 406: Cold bend test*

EN 3745-407, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 407: Flammability*

EN 3745-411, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 411: Resistance to fluids*

EN 3745-503, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 503: Scrape abrasion*

EN 3745-505, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 505: Cable tensile strength*

EN 3745-506, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 506: Impact resistance*

EN 3745-507, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 507: Cut-through*

EN 3745-508, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 508: Torsion*

EN 3745-509, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 509: Kink test*

EN 3745-510, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 510: Bending test*

EN 3745-512, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 512: Flexure endurance*

EN 3745-513, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 513: Crush resistance*

EN 3745-516, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 516: Severe cable bend test*

EN 3745-517, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 517: Cable tie clamping test*

EN 3745-601, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 601: Smoke density*

EN 3745-602, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 602: Toxicity*

EN 3745-701, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 701: Strippability*

EN 3745-703, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 703: Durability of manufacturer's marking*

EN 3745-705, *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 705: Contrast measurement*

EN 4641-001, *Aerospace series — Cables, optical, 125 µm diameter cladding — Part 001: Technical specification*

EN 4641-102, *Aerospace series — Cables, optical 125 µmdiameter cladding — Part 102: Semi-loose 62,5 µm/125 µm GI fibre nominal 1,8 mm outside diameter — Product standard*

TR 4647,[1] *Aerospace series — Termination procedure for EN 4639 optical contact*

[1] Published as ASD-STAN TR, available at: https://www.asd-stan.org/.