

SLOVENSKI STANDARD

SIST EN 4612-007:2019

01-november-2019

Nadomešča:

SIST EN 4612-007:2011

Aeronavtika - Kabli, električni, za splošne namene, eno- in večžilni - Družina XLETFE - Oplaščeni ali zaslonjeni in oplaščeni - 007. del: Posrebreni baker - Obratovalne temperature med -65 °C in 150 °C - Enojno ekstrudirana izolacija za zunanjo uporabo, s plaščem brez zaslona - Potiskljiva z UV-laserjem - Standard za proizvod

Aerospace series - Cables, electrical, for general purpose, single and multicore assembly - XLETFE Family - Jacketed or screened and jacketed - Part 007: Silver plated copper - Operating temperatures, between -65 °C and 150 °C - Single extruded wall for open applications, with jacket without screen - UV laser printable - Product standard

[SIST EN 4612-007:2019](#)

Luft- und Raumfahrt - Ein- und mehradrige elektrische Leitungen für allgemeine Verwendung - XLETFE Familie - mit Mantel oder geschirmt und Mantel - Teil 007: Kupfer versilbert - Betriebstemperaturen zwischen -65 °C und 150 °C - Einfach extrudierte Isolierung für externe Verwendung, mit Mantel ohne Schirm - UV-Laser bedruckbar - Produktnorm

Série aérospatiale - Câbles, électriques, d'usage général, mono et multiconducteurs -
Famille XLETFE - Gainés ou blindés et gainés - Partie 007 : Cuivre argenté -
Températures de fonctionnement comprises entre - 65 °C et 150 °C - Fil simple isolé
pour applications externes, gainé et non blindé - Marquable au laser UV - Norme de
produit

Ta slovenski standard je istoveten z: EN 4612-007:2019

ICS:

29.060.20	Kabli	Cables
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 4612-007:2019

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 4612-007:2019](https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019)

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 4612-007:2019

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

EUROPEAN STANDARD

EN 4612-007

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 49.060

Supersedes EN 4612-007:2011

English Version

Aerospace series - Cables, electrical, for general purpose, single and multicore assembly - XLETFE Family - Jacketed or screened and jacketed - Part 007: Silver plated copper - Operating temperatures, between - 65 °C and 150 °C - Single extruded wall for open applications, with jacket without screen - UV laser printable - Product standard

Série aérospatiale - Câbles, électriques, d'usage général, mono et multiconducteurs - Famille XLETFE - Gainés ou blindés et gainés - Partie 007 : Cuivre argenté - Températures de fonctionnement comprises entre - 65 °C et 150 °C - Fil simple isolé pour applications externes, gainé et non blindé - Marquable au laser UV - Norme de produit

Luft- und Raumfahrt - Ein- und mehradrige elektrische Leitungen für allgemeine Verwendung - XLETFE Familie - mit Mantel oder geschirmt und Mantel - Teil 007: Kupfer versilbert - Betriebstemperaturen zwischen - 65 °C und 150 °C - Einfach extrudierte Isolierung für externe Verwendung, mit Mantel ohne Schirm - UV-Laser bedruckbar - Produktnorm

**ITeH STANDARD PREVIEW
(standards.iteh.ai)**

This European Standard was approved by CEN on 29 April 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.



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

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

Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Materials and construction	5
5 Required characteristics	6
6 Quality assurance	8
7 Designation	9
8 Identification and marking	9
9 Packaging, labelling and delivery lengths	9
Bibliography	10

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 4612-007:2019](#)

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

European foreword

This document (EN 4612-007:2019) 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.

This document supersedes EN 4612-007:2011.

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

ITEH STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 4612-007:2019](https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019)

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

EN 4612-007:2019 (E)

1 Scope

This document specifies the characteristics of UV laser printable jacket, silver plated copper conductor, electrical cables crosslinked ethylene tetra fluoro ethylene co-polymer (XLETFE) family for use in the on-board electrical systems of aircraft operating at temperatures between – 65 °C and 150 °C, operating at voltages not exceeding 600 V rms at sea level. This insulation system has been used in aerospace applications using 115 V (phase-to-neutral) 400 Hz ac and 28 Vdc. Verification of the suitability of cables for use in other electrical systems is the responsibility of the user.

These jacketed cables are suitable for airframe use without additional protection when the jacket is present. When the jacket is stripped back the cores may need additional protection. In case of conflict between this document and other referenced documents the requirements of this standard shall take precedence.

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 2084, *Aerospace series — Cables, electrical, general purpose, with conductors in copper or copper alloy — Technical specification*

EN 2235, *Aerospace series — Single and multicore electrical cables, screened and jacketed — Technical specification*¹⁾

EN 3475 (all parts), *Aerospace series — Cables, electrical, aircraft use — Test methods*

EN 4611-005, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Part 005: Silver plated copper — Operating temperatures between - 65 °C and 150 °C — Single extruded wall for enclosed applications — UV laser printable — Product standard*

EN 4612-002, *Aerospace series — Cables, electrical, for general purpose, single and multicore assembly — XLETFE Family — Jacketed or screened and jacketed — Part 002: General*¹⁾

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3475-100 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

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/>

4 Materials and construction

4.1 Materials

These cables shall consist of the following:

- cores according to EN 4611-005;
- number of cores 2 (two) to 4 (four).

Cores be twisted together according to EN 2235.

Filler cores shall not be permitted.

Outer jacket:

- it shall be possible to mark the jacket by UV laser printing;
- minimum thickness for 2 (two) cores shall be 0,13 mm;
- minimum thickness for 3 (three) cores and 4 (four) cores shall be 0,15 mm.

4.2 Construction

See Table 1.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 4612-007:2019

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

Table 1 — Multicore without screen, with jacket

Size	AWG ^a	2 (two) cores			3 (three) cores			4 (four) cores		
		Dia. max.	Mass max.	DC Res. max.	Dia. max.	Mass max.	DC Res. max.	Dia. max.	Mass max.	DC Res. max.
		mm	kg/km	Ω/km	mm	kg/km	Ω/km	mm	kg/km	Ω/km
001 ^b	26	2,04	5,34	153,5	2,17	7,60	153,5	2,38	9,79	153,5
002 ^b	24	2,22	6,80	109,2	2,38	9,85	109,2	2,60	13,12	109,2
004	22	2,56	10,14	61,8	2,73	14,52	61,8	3,01	19,41	61,8
006	20	3,10	15,78	34,2	3,32	22,84	34,2	3,67	29,94	34,2
010	18	3,58	22,81	21,7	3,83	33,25	21,7	4,25	44,18	21,7
012	16	4,04	28,51	15,4	4,33	42,24	15,4	4,80	56,55	15,4
020	14	4,98	43,74	11,2	5,41	65,07	11,2	6,00	85,76	11,2
030	12	5,94	67,36	7,0	6,38	99,41	7,0	7,09	134,21	7,0

^a AWG = Closest American Wire Gauge.
^b Silver plated copper alloy conductor.

4.3 Colour coding of cores

(standards.iteh.ai)

See EN 4612-002.

[SIST EN 4612-007:2019](https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019)

5 Required characteristics

<https://standards.iteh.ai/catalog/standards/sist/a367c343-8677-473a-9f55-9ea7c94a0857/sist-en-4612-007-2019>

According to EN 2084 and EN 3475-100.

See Table 2.

Table 2 (1 of 3)

EN 3475-	Designation of the test	Details
201	Visual examination	Applicable
202	Mass	Applicable; see Table 1.
203	Dimensions	Applicable; see Table 1.
301	Ohmic resistance per unit length	Applicable; see Table 1.
302	Voltage proof test	Not applicable
303	Insulation resistance	Not applicable
304	Surface resistance	Not applicable
305	Overload resistance	Not applicable
401	Accelerated ageing	Applicable Temperature (200 ± 3) °C