BS EN 2235:2022



BSI Standards Publication

Aerospace series — Single and multicore electrical cables, screened and jacketed — Technical specification

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee ACE/6, Aerospace avionic electrical and fibre optic technology.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Aerospace series - Single and multicore electrical cables, screened and jacketed - Technical specification

Série aérospatiale - Câbles électriques, mono et multiconducteurs, blindés et gainés - Spécification technique

Luft- und Raumfahrt - Ein- und mehradrige geschirmte und ummantelte elektrische Leitungen - Technische Lieferbedingungen

This European Standard was approved by CEN on 17 July 2022.

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European foreword

This document (EN 2235:2022) 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 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of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

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1 Scope

This document specifies the required characteristics, test methods, qualification and acceptance conditions of single and multicore cables, screened, jacketed and multicore jacketed cables for use in aircraft electrical systems.

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 2083, *Aerospace series — Copper or copper alloy conductors for electrical cables — Product standard*

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

EN 3475-100, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General*

EN 3475-201, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 201: Visual examination*

EN 3475-202, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 202: Mass*

EN 3475-203, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 203: Dimensions*

EN 3475-301, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 301: Electrical resistance per unit length*

EN 3475-302, *Aerospace series — Cable, electrical, aircraft use — Test methods — Part 302: Voltage proof test*

EN 3475-303, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 303: Insulation resistance*

EN 3475-304, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 304: Surface resistance*

EN 3475-305, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 305: Overload resistance*

EN 3475-306, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 306: Continuity of conductors*

EN 3475-307, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 307: Corona extinction voltage*

EN 3475-401, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 401: Accelerated ageing*

EN 3475-402, *Aerospace series - Cables, electrical, aircraft use - Test methods — Part 402: Shrinkage and delamination*

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EN 3475-403, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 403: Delamination and blocking*

EN 3475-404, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 404: Thermal shock*

EN 3475-405, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 405: Bending at ambient temperature*

EN 3475-406, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 406: Cold bend test*

EN 3475-407, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 407: Flammability*

EN 3475-408, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 408: Fire resistance*

EN 3475-409, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 409: Air-excluded ageing*

EN 3475-410, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 410: Thermal endurance*

EN 3475-411, *Aerospace series — Cables, electrical, aircraft use - Test methods — Part 411: Resistance to fluids*

EN 3475-412, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 412: Humidity resistance*

EN 3475-413, *Aerospace series — Cable, electrical, aircraft use — Test methods — Part 413: Wrap back test*

EN 3475-414, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 414: Differential scanning calorimeter (DSC test)*

EN 3475-415, *Aerospace series — Cables, electrical, aircraft use - Test methods — Part 415: Rapid change of temperature*

EN 3475-416, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 416: Thermal stability*

EN 3475-501, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 501: Dynamic cut-through*

EN 3475-502, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 502: Notch propagation*

EN 3475-503, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 503: Scrape abrasion*

EN 3475-504, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 504: Torsion*

EN 3475-505, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 505: Tensile test on conductors and strands*

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EN 3475-506, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 506: Plating continuity*

EN 3475-507, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 507: Adherence of plating*

EN 3475-508, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 508: Plating thickness*

EN 3475-509, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 509: Solderability*

EN 3475-510, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 510: Tensile strength and elongation of extruded insulation, sheath and jacket material*

EN 3475-511, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 511: Cable-to-cable abrasion*

EN 3475-512, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 512: Flexure endurance*

EN 3475-513, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 513: Deformation resistance (Installation with plastic cable ties)*

EN 3475-601, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 601: Smoke density*

EN 3475-602, *Aerospace series — Cables, electrical, aircraft use — Test methods - Part 602: Toxicity*

EN 3475-603, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 603: Resistance to wet arc tracking*

EN 3475-604, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 604: Resistance to dry arc propagation*

EN 3475-605, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 605: Wet short circuit test*

EN 3475-701, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 701: Strippability and adherence of insulation to the conductor*

EN 3475-702, *Aerospace series — Cables, electrical, aircraft use — Test methods, Part 702: Screen pushback capability*

EN 3475-703, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 703: Permanence of manufacturer's marking*

EN 3475-704, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 704: Flexibility*

EN 3475-705, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 705: Contrast measurement*

EN 3475-706, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 706: Laser markability*

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