

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)



BSI Standards Publication

Aerospace series — Requirements and tests on user-applied markings on aircraft electrical cables

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 3838:2022. It supersedes BS EN 3838:2010, which is withdrawn.

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.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 14009 5

ICS 49.040; 49.060

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2022.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

May 2022

ICS 49.060

Supersedes EN 3838:2010

English Version

Aerospace series - Requirements and tests on user-applied markings on aircraft electrical cables

Série aérospatiale - Exigences et essais sur les marquages utilisateurs de câbles électriques aéronautiques

Luft- und Raumfahrt - Anforderungen und Prüfungen der Anwenderkennzeichnung auf elektrischen Luftfahrzeugleitungen

This European Standard was approved by CEN on 13 March 2022.

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		4
Introduction		5
1 Scope		6
2 Normative references		6
3 Terms and definitions		7
4 Qualification tests		7
4.1 Tests.....		7
4.2 Test sequence.....		7
5 Acceptance tests		9
6 Test methods		9
6.1 Visual examination of markings		9
6.1.1 Object		9
6.1.2 Apparatus		9
6.1.3 Test specimen		9
6.1.4 Procedure		9
6.1.5 Requirements.....		9
6.2 Permanence of markings		9
6.2.1 Object		9
6.2.2 Apparatus		10
6.2.3 Test specimen		10
6.2.4 Procedure		10
6.2.5 Requirements.....		10
6.3 Resistance to fluids		10
6.3.1 Object		10
6.3.2 Apparatus		10
6.3.3 Specimen.....		10
6.3.4 Procedure		10
6.3.5 Requirements.....		10
6.4 Heat ageing		10
6.4.1 Object		10
6.4.2 Apparatus		10
6.4.3 Specimen.....		10
6.4.4 Procedure		11
6.4.5 Requirements.....		11
6.5 Exposure to light		11
6.5.1 Object		11
6.5.2 Apparatus		11
6.5.3 Specimen.....		11
6.5.4 Procedure		11
6.5.5 Requirements.....		11
6.6 Marking contrast		12
6.6.1 Object		12
6.6.2 Apparatus		12
6.6.3 Test specimen		12

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

6.6.4	Procedure	12
6.6.5	Requirements	12
6.7	Bending at ambient temperature	12
6.7.1	Object	12
6.7.2	Apparatus	12
6.7.3	Test specimen	12
6.7.4	Procedure	12
6.7.5	Requirements	12
6.8	Voltage test	13
6.8.1	Object	13
6.8.2	Apparatus	13
6.8.3	Test specimen	13
6.8.4	Procedure	13
6.8.5	Requirements	13
	Bibliography	14

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document (EN 3838:2022) 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 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 2022, and conflicting national standards shall be withdrawn at the latest by November 2022.

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 3838:2010.

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, Turkey and the United Kingdom.

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

Introduction

Durability of function-related marking of aircraft electrical cables is of great importance throughout the life of an aircraft, during initial assembly, operation and maintenance operations in service.

Markings should, therefore, be made to a sufficiently high standard to satisfy requirements initially and for the remainder of the expected life marked cable or equipment containing it.

Markings are applied by the user to the cable insulation, jacket or sheath and should not degrade the performance of the cable. They should be applied in accordance with design requirements using a process approved by the Design Authority.

This is a preview of "BS EN 3838:2022". [Click here to purchase the full version from the ANSI store.](#)

1 Scope

This document specifies tests that are to be performed on markings applied by the user to ensure that their durability is satisfactory and that, after application of markings directly to the cable insulation, jacket or sheath, the cable will meet the performance requirements laid down.

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

EN 3475-302:2006, *Aerospace series — Cable, electrical, aircraft use — Test methods — Part 302: Voltage proof test*

EN 3475-401:2002, *Aerospace series — Cables, electrical, aircraft use — Test Methods — Part 401: Accelerated ageing*

EN 3475-405:2002, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 405: Bending at ambient temperature*

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

EN 3475-703:2002, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 703: Permanence of manufacturer's marking*

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

EN ISO 4892-3, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps (ISO 4892-3)*