

STN	Letectvo a kozmonautika Tlmiče s puzdrami Časť 1: Technická špecifikácia	STN EN 4841-1 31 0712
------------	---	---

Aerospace series - Shock mount with bushes - Part 1: Technical specification

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. 08/22

Obsahuje: EN 4841-1:2022

135484

EUROPEAN STANDARD

EN 4841-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2022

ICS 49.035

English Version

Aerospace series - Shock mount with bushes - Part 1: Technical specification

Série aérospatiale - Amortisseur de vibrations à bagues
- Partie 1 : Spécification technique

Luft- und Raumfahrt - Schwingungsdämpfer mit
Buchse - Teil 1: Technische Lieferbedingung

This European Standard was approved by CEN on 12 July 2020.

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

EN 4841-1:2022 (E)

Contents	Page
European foreword	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	7
4 Symbols and abbreviations	8
5 Required characteristics, inspections and test methods	8
6 Static loads	9
6.1 Description of test procedure	9
6.2 Load calculation	9
7 Fatigue loads.....	9
8 Technical requirements	9
8.1 General.....	9
8.2 Check of external surfaces.....	10
8.2.1 Visual inspection.....	10
8.2.2 Roughness check.....	10
8.3 Dimensional check	10
8.3.1 Check of general shock mount design	10
8.3.2 Check of shock mount geometrical characteristics	10
8.4 Check of mass	10
8.5 Stiffness	10
8.6 Load test.....	10
8.6.1 Check of limit load	10
8.6.2 Check of ultimate load.....	10
8.6.3 Load direction	10
8.7 Corrosion test.....	10
8.8 Fire worthiness requirements	11
8.9 Environmental conditions	11
8.9.1 Requirements.....	11
8.9.2 Purpose of the test.....	11
8.9.3 Test procedure.....	11
8.9.4 Conclusion	11
8.10 Marking	11
9 Qualification	11
9.1 Approval of manufacturers	11
9.2 Classification of inspection.....	11
9.3 Qualification test.....	11
9.4 First article inspection.....	12
9.5 Conformance/Acceptance test.....	12
10 Condition on delivery.....	12
10.1 Packaging.....	12
10.2 Marking of packages	12
10.3 Unit and transport packages.....	12

EN 4841-1:2022 (E)

11	Material	12
11.1	Requirement	12
11.2	Inspections and test method	13
	Annex A (normative) Sampling	18
A.1	Acceptance test samples	18
A.2	Qualification test samples	18
	Bibliography	20

EN 4841-1:2022 (E)**European foreword**

This document (EN 4841-1:2022) 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 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.

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.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

EN 4841-1:2022 (E)**Introduction**

This document is part of the series of EN mechanical standards for aerospace applications.

EN 4841-1:2022 (E)**1 Scope**

This document specifies the required characteristics, inspection and test methods, qualification and acceptance conditions for shock mounts with bushes, designed to withstand static and dynamic loads possible for aerospace interior applications in the temperature range from -55 °C to 85 °C.

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 2424:2008, *Aerospace series — Marking of aerospace products*

EN 2825, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of smoke density*

EN 2826, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of gas components in the smoke*

EN 3844 (all parts), *Aerospace series — Flammability of non-metallic materials*

EN 4662, *Aerospace series — Test specification for vibration control components*

EN 4841-2, *Aerospace series — Shock mounts with bushes — Part 2: Technical overview*

EN 10204, *Metallic products — Types of inspection documents*

EN ISO 75-2, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite (ISO 75-2)*

EN ISO 175, *Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals (ISO 175)*

EN ISO 178, *Plastics — Determination of flexural properties (ISO 178)*

EN ISO 179-1:2010, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1:2010)*

EN ISO 291, *Plastics — Standard atmospheres for conditioning and testing (ISO 291)*

EN ISO 527-2:2012, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:2012)*

EN ISO 1172, *Textile-glass-reinforced plastics — Prepregs, moulding compounds and laminates — Determination of the textile-glass and mineral-filler content; calcination methods (ISO 1172)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN 4841-1:2022 (E)

DIN 53504:2017, *Testing of rubber — Determination of tensile strength at break, tensile stress at yield, elongation at break and stress values in a tensile test*¹

DIN 65271, *Aerospace series — Elastomeric semi-finished products and parts — Technical specification*¹

ISO 34-1:2015, *Rubber, vulcanized or thermoplastic — Determination of tear strength — Part 1: Trouser, angle and crescent test pieces*

ISO 37:2017, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 48-4, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 4: Indentation hardness by durometer method (Shore hardness)*

ISO 1817:2015, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2781:2018, *Rubber, vulcanized or thermoplastic — Determination of density*

FAR/JAR/CS 25.853:1999, *Compartment interiors*²

RTCA DO-160G:2010, *Environmental Conditions and Test Procedures for Airborne Equipment*³

UL 746B, *Standard for Safety for Polymeric Materials — Long Term Property Evaluations*⁴

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

¹ Published by: Beuth Verlag GmbH. www.beuth.de

² Published by: European Aviation Safety Agency, Postfach 10 12 53, D-50452 Koeln, Germany.

³ Published by: Radio Technical Commission for Aeronautics (RTCA), 1140 Connecticut Ave., N.W. Suite 1020, Washington, D.C. 20036, USA.

⁴ Published as UL Standard, <https://ulstandards.ul.com/>.