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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4841-1:2022 sisaldab Euroopa standardi EN 4841-1:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 4841-1:2022 consists of the English text of the European standard EN 4841-1:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 25.05.2022.	Date of Availability of the European standard is 25.05.2022.
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Luft- und Raumfahrt - Schwingungsdämpfer mit Buchse - Teil 1: Technische Lieferbedingung

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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of an identical text or by endorsement, at the latest by November 2022, and conflicting national standards shall be withdrawn at the latest by November 2022.

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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.

Introduction

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

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)*

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]

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1
standard part
complete shock mount assembly, which consists of inner and outer metal rings with vulcanized rubber and spherical bearing

3.2
Batch definition
3.2.1
manufacturing batch
batch composed of inner and outer rings made of same material (same material batch), with same dimensions and belonging to the same manufacturing campaign and vulcanized with the same rubber compound

[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/.