

Aerospace series - Non-metallic materials - Foaming
structural adhesives - Test methods - Part 2:
Compressive tube shear

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

**Aerospace series - Non-metallic materials - Foaming
structural adhesives - Test methods - Part 2: Compressive
tube shear**

Série aérospatiale - Matériaux non-métalliques -
Adhésifs structuraux expansibles - Méthodes d'essai -
Partie 2 : Cisaillement sur tube en compression

Luft- und Raumfahrt - Nichtmetallische Werkstoffe -
Strukturelle Expansionsklebstoffe - Prüfverfahren -
Teil 2: Abscherung von Rohren unter Druck

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

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European foreword

This document (EN 2667-2:2018) 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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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1 Scope

This European Standard defines the test method for determining the bond strength of structural foaming adhesive films or pastes by means of the tube test method.

This test method is suitable for determining bond strength in relation to the density after curing of the adhesive foam by means of compressive tube shear specimens.

It preferably applies to high expansion ratios, i.e. > 50 % measured according to the method EN 2667-3.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2334, *Aerospace series — Chromic-sulphuric acid pickle of aluminium and aluminium alloys*

EN 2388, *Aluminium alloy 2024-T351 — Tubes for structures $0,6 \text{ mm} \leq a \leq 12,5 \text{ mm}$ — Aerospace series* ¹⁾

EN 2667-3, *Aerospace series — Non-metallic materials — Foaming structural adhesives films — Test methods — Part 3: Expansion ratio and volatile content* ²⁾

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

3 Apparatus and auxiliary equipment

3.1 Tensile testing machine

The test machine shall be approved to ISO 7500-1 and so designed that the breaking load lies between 10 % and 90 % of the selected full-scale capacity.

The loads shall be recorded to an accuracy of 1 %.

3.2 Auxiliary equipment

- air circulating oven with an accuracy of $\pm 5 \text{ }^{\circ}\text{C}$;
- balance with an accuracy to the nearest 0,01 g;
- band saw;
- thermoelectric couple;
- mounting device per Figure 1.

1) Published as ASD-STAN Standard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN) (www.asd-stan.org)

2) Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN) (www.asd-stan.org)