

Aerospace series - Non-metallic materials - Foaming structural adhesive films - Test methods - Part 3:
Expansion ratio and volatile content

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 2667-3:2019 sisaldab Euroopa standardi EN 2667-3:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 2667-3:2019 consists of the English text of the European standard EN 2667-3:2019.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.09.2019.	Date of Availability of the European standard is 04.09.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 49.025.50

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

ICS 49.025.50

English Version

Aerospace series - Non-metallic materials - Foaming structural adhesive films - Test methods - Part 3: Expansion ratio and volatile content

Série aérospatiale - Matériaux non-métalliques -
Adhésifs structuraux expansibles en film - Méthodes
d'essai - Partie 3 : Taux d'expansion et taux de matières
volatiles

Luft- und Raumfahrt - Nichtmetallische Werkstoffe -
Strukturelle Expansionsklebstoffe in Filmform -
Prüfverfahren - Teil 3: Expansionsgrade und Anteil an
flüchtigen Bestandteilen

This European Standard was approved by CEN on 17 September 2018.

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		3
1	Scope.....	4
2	Normative references.....	4
3	Terms and definitions	4
4	Principle	4
5	Apparatus and auxiliary equipment	4
6	Test specimens.....	5
7	Expression of results.....	6
8	Designation	6
9	Test report.....	6

European foreword

This document (EN 2667-3:2019) 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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, 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.

1 Scope

This document specifies the test method for determining the expansion ratio and the volatile content in structural foaming adhesive films.

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 2090, *Aerospace series — Aluminium alloy AL-P2024 - — T3 — Clad sheet and strip — $0,3\text{ mm} \leq a \leq 6\text{ mm}$*

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

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:

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

3.1

expansion ratio

the increase in thickness after curing of a foaming adhesive film expressed as a percentage of its original, pre-cured thickness

3.2

volatile content

the decrease in mass after curing of a foaming adhesive film expressed as a percentage of its original, pre-cured mass

4 Principle

The principle of the test is to measure the thickness and weigh the foaming adhesive film before and after curing on a support material.

5 Apparatus and auxiliary equipment

Air circulating oven:

- programmable or controllable when conducting the curing cycle;
- regulating in temperature stages of $\pm 2\text{ }^{\circ}\text{C}$;
- equipped with thermoelectric couples for continuously recording the temperatures.

Balance with an accuracy of 1 mg.

Micrometer provided with a flat ended probe 6 mm in diameter for thickness measurement with an accuracy of 0,01 mm.

Desiccator.