

Aerospace series - Fibre reinforced plastics -  
Determination of the effect of exposure to humid  
atmosphere on physical and mechanical characteristics

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 2823:2017 sisaldab Euroopa standardi EN 2823:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 2823:2017 consists of the English text of the European standard EN 2823:2017.
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 15.03.2017.	Date of Availability of the European standard is 15.03.2017.
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ICS 49.025.40

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ICS 49.025.40

English Version

## Aerospace series - Fibre reinforced plastics - Determination of the effect of exposure to humid atmosphere on physical and mechanical characteristics

Série aérospatiale - Plastiques renforcés de fibres -  
Détermination de l'influence de l'exposition à  
l'atmosphère humide sur les caractéristiques  
mécaniques et physiques

Luft- und Raumfahrt - Faserverstärkte Kunststoffe -  
Ermittlung des Einflusses der Auslagerung in feuchtem  
Klima auf die mechanischen und physikalischen  
Eigenschaften

This European Standard was approved by CEN on 6 February 2017.

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.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 2823:2017) 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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] 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.

## 1 Scope

This European Standard specifies the method for determining the effect of exposure to a humid atmosphere on the physical and mechanical characteristics of fibre reinforced plastics.

This standard applies to all laminates, whatever the nature of the reinforcement and organic matrix used, unless otherwise indicated in the material standard and/or technical specification.

## 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 2743, *Aerospace series — Fibre reinforced plastics — Standard procedures for conditioning prior to testing unaged materials*

EN 2744, *Aerospace series — Non-metallic materials — Preferred test temperatures*

EN 3615, *Aerospace series — Fibre reinforced plastics — Determination of the conditions of exposure to humid atmosphere and moisture absorption* 1)

## 3 Terms and definitions

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

### 3.1

#### **"pilot" specimens**

specimens intended to establish the exposure temperature required to achieve an equilibrium condition at the specified humidity level in a limited period of time

### 3.2

#### **specimens "to be aged"**

specimens intended to determine the mechanical and physical characteristics after exposure

### 3.3

#### **"traveller" specimens**

specimens representative of specimens "to be aged" which accompany these in the climatic chamber and are intended to monitor moisture absorption

### 3.4

#### **equilibrium condition**

condition of the material at a specified hygrometry when it has reached constant mass

### 3.5

#### **constant mass**

mass of the specimen obtained after several successive weighings carried out at regular intervals when the difference between weighings is less than a specified value

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