

Aerospace series - Carbon fibre laminates -
Determination of the fibre, resin and void contents

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EUROPEAN STANDARD

EN 2564

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 2564:1998

English Version

Aerospace series - Carbon fibre laminates - Determination of the fibre, resin and void contents

Série aérospatiale - Stratifiés de fibres de carbone -
Détermination de la teneur en fibres, en résine et du
taux de porosité

Luft- und Raumfahrt - Kohlenstoffaser-Laminat -
Bestimmung der Faser-, Harz- und Porenanteile

This European Standard was approved by CEN on 16 April 2018.

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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

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Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Principle	4
5 Apparatus and reagents	4
6 Specimens	5
7 Health, safety and environmental aspects	5
8 Atmosphere for testing	5
9 Procedure	6
10 Expression of results	8
11 Designation	10
12 Test report	10
Annex A (informative) Standard evolution form	11

European foreword

This document (EN 2564:2018) 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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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1 Scope

This European Standard specifies the methods for determining the fibre content by volume and mass and, by correlation, the resin content by volume and mass and void content by volume, of carbon fibre laminates, for aerospace applications.

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

ISO 1183, *Plastics — Methods for determining the density and relative density of non-cellular plastics*

ISO 10119, *Carbon fibre — Determination of density*

3 Terms and definitions

No terms and definitions are listed in this document.

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>

4 Principle

Determination of the difference in mass of specimens before and after extraction of the resin by sulphuric acid digestion.

Two methods are applicable:

- Method A is the reference method,
- Method B is a simplified method.

5 Apparatus and reagents

5.1 Balance accurate to $\pm 0,1$ mg.

5.2 Tweezers.

5.3 Cutting device, such as a diamond blade saw or any other suitable apparatus.

5.4 250 ml double necked pear-shaped flask equipped with 50 ml dropping funnel, air inlet and a water pump.

5.5 Beakers of various capacities, including 400 ml.

5.6 20 ml sintered glass crucible (n° 2 porosity) and suitable filtration assembly.