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BSI Standards Publication

Aerospace series — Definitions of imperfections and defects in organic matrix composite materials

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National foreword

This British Standard is the UK implementation of EN 4866:2021.

The UK participation in its preparation was entrusted to Technical Committee ACE/65, Non-metallic materials for aerospace purposes.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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31 August 2021	Implementation of CEN correction notice 30 June 2021: Annex A table updated and footnote in bibliography deleted

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EUROPÄISCHE NORM

June 2021

ICS

English Version

Aerospace series - Definitions of imperfections and defects in organic matrix composite materials

Série aérospatiale - Définitions des imperfections et défauts dans les matériaux composites à matrice organique

Luft- und Raumfahrt - Definitionen von Unvollkommenheiten und Defekten in der organischen Matrix Kompositmaterialien

This European Standard was approved by CEN on 19 August 2019.

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European foreword

This document (EN 4866:2021) 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, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2021, and conflicting national standards shall be withdrawn at the latest by December 2021.

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.

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1 Scope

This document provides a list of terms with their definitions illustrated by typical photographs, in order to define a common vocabulary on the imperfections and damage that may occur during the manufacture of organic matrix composite materials (which will be called "resin" in this document). Some types of damage may also be encountered in use.

This document is restricted to their definitions and does not give any acceptance criteria. The word "imperfection" will be preferred to the word "defect", although the word "defect" might be usually used. Defect acceptance criteria to be discussed between the user and customer and documented appropriately between the two parties.

2 Normative references

There are no normative references in this document.

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 General

3.1.1

damage

damage corresponds to degradation of the resin and/or the fibres caused by mechanical, thermal or environmental stresses

3.1.2

defect

imperfection or damage which exceeds the part acceptance criterion

3.1.3

imperfection

particularity encountered in composite materials that may result from the manufacturing process and/or the conditions of use

Note 1 to entry: Detection may be carried out visually or by using laboratory equipment.

3.1.4

indication

information given by non-destructive test means and which may correspond to an imperfection