

Aerospace series - Carbon fibre reinforced plastics -
Test method - Determination of interlaminar fracture
toughness energy - Mode II - GIIC

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 6034:2015 sisaldab Euroopa standardi EN 6034:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 6034:2015 consists of the English text of the European standard EN 6034:2015.
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.
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English Version

**Aerospace series - Carbon fibre reinforced plastics - Test
method - Determination of interlaminar fracture
toughness energy - Mode II - GIIC**

Série aérospatiale - Matières plastiques renforcées de
fibres de carbone - Méthode d'essai - Détermination de
l'énergie de ténacité en rupture interlaminaire - Mode
II - GIIC

Luft- und Raumfahrt - Kohlenstofffaserverstärkte
Kunststoffe - Prüfverfahren - Bestimmung der
interlaminaren Energiefreisetzungsrate - Mode II - GIIC

This European Standard was approved by CEN on 10 August 2013.

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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 6034:2015) 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of an identical text or by endorsement, at the latest by May 2016, and conflicting national standards shall be withdrawn at the latest by May 2016.

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1 Scope

This standard specifies the procedure to determine the mode II interlaminar fracture toughness energy G_{IIC} of carbon fibre composites manufactured from unidirectional tape or woven fabric.

This standard does not give any directions necessary to meet health and safety requirements. It is the responsibility of the user of this standard to consult and establish appropriate health and safety precautions.

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 2565, *Aerospace series — Preparation of carbon fibre reinforced resin panels for test purposes* ¹⁾

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

EN 2823, *Aerospace series — Fibre reinforced plastics — Test method for the determination of the effect of exposure to humid atmosphere on physical and mechanical characteristics* ¹⁾

EN 6033, *Aerospace series — Carbon fibre reinforced plastics — Test method — Determination of interlaminar fracture toughness energy — Mode I — G_{IC}* ¹⁾

3 Terms and definitions

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

3.1
interlaminar fracture toughness energy
the interlaminar fracture toughness energy is the energy per unit plate width which is necessary to produce a unit crack growth at an interlaminar crack between two plies of a laminate

3.2
mode II
the mode indicates the method by which the load is applied to produce the crack. Mode II crack extends as a result of shear forces at the crack tip introduced by a flexural test

3.3
 G_{IIC}
 G_{IIC} is the designation of the interlaminar fracture toughness energy determined by a mode II test procedure

1) Published as ASD-STAN Prestandard at the date of publication of this standard. <http://www.asd-stan.org/>