



NSAI
Standards

Irish Standard
I.S. EN IEC 61189-2-807:2021

Test methods for electrical materials,
printed boards and other interconnection
structures and assemblies - Part 2-807:
Test methods for materials for
interconnection structures -
Decomposition temperature (T_d) using TGA

I.S. EN IEC 61189-2-807:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN IEC 61189-2-807:2021 is the adopted Irish version of the European Document EN IEC 61189-2-807:2021, Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-807: Test methods for materials for interconnection structures - Decomposition temperature (T_d) using TGA

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EUROPEAN STANDARD

EN IEC 61189-2-807

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2021

ICS 31.180

English Version

Test methods for electrical materials, printed boards and other
interconnection structures and assemblies - Part 2-807: Test
methods for materials for interconnection structures -
Decomposition temperature (T_d) using TGA
(IEC 61189-2-807:2021)

Méthodes d'essai pour les matériaux électriques, les cartes
imprimées et autres structures d'interconnexion et
ensembles - Partie 2-807: Méthodes d'essai des matériaux
pour structures d'interconnexion - Température de
décomposition (T_d) par analyse thermogravimétrique
(IEC 61189-2-807:2021)

Prüfverfahren für Elektromaterialien, Leiterplatten und
andere Verbindungsstrukturen und Baugruppen - Teil 2-
807: Prüfverfahren für Materialien für
Verbindungsstrukturen - Zersetzungstemperatur (T_d) unter
der Nutzung von TGA
(IEC 61189-2-807:2021)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61189-2-807:2021 (E)

European foreword

The text of document 91/1697/CDV, future edition 1 of IEC 61189-2-807, prepared by IEC/TC 91 “Electronics assembly technology” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61189-2-807:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-07-08 level by publication of an identical national standard or by endorsement
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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60194-2	-	Printed boards design, manufacture and-assembly - Vocabulary - Part 2: Common usage in electronic technologies as well as printed board and electronic assembly technologies		-
ISO 11358-1	-	Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles	ofEN ISO 11358-1	-

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IEC 61189-2-807

Edition 1.0 2021-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Test methods for electrical materials, printed boards and other interconnection structures and assemblies –
Part 2-807: Test methods for materials for interconnection structures –
Decomposition temperature (T_d) using TGA**

**Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles –
Partie 2-807: Méthodes d'essai des matériaux pour structures d'interconnexion – Température de décomposition (T_d) par analyse thermogravimétrique**





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Edition 1.0 2021-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Part 2-807: Test methods for materials for interconnection structures –
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**Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles –
Partie 2-807: Méthodes d'essai des matériaux pour structures d'interconnexion – Température de décomposition (T_d) par analyse thermogravimétrique**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARDS
AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –****Part 2-807: Test methods for materials for interconnection structures –
Decomposition temperature (T_d) using TGA**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 61189-2-807 has been prepared by IEC technical committee 91: Electronics assembly technology. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
91/1697/CDV	91/1738/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 61189 series, published under the general title *Test methods for electrical materials, printed boards and other interconnection structures and assemblies*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARDS AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –

Part 2-807: Test methods for materials for interconnection structures – Decomposition temperature (T_d) using TGA

1 Scope

This part of IEC 61189 specifies a test method to determine the decomposition temperature (T_d) of base laminate materials using thermogravimetric analysis (TGA).

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.

IEC 60194-2, *Printed boards design, manufacture and assembly – Vocabulary – Part 2: Common usage in electronic technologies as well as printed board and electronic assembly technologies*

ISO 11358-1, *Plastics – Thermogravimetry (TG) of polymers – Part 1: General principles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60194-2 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 <https://www.iso.org/obp>

4 Test specimens

4.1 Specimens shall be an unclad laminate material or laminate material where the copper has been completely removed.

4.2 The typical weight of the sample is 10 mg to 30 mg. Samples shall be cut to a specified size which is suitable for the sample pan using appropriate procedures and equipment. All edges of the sample shall be finished such that it is smooth and burr-free to allow the sample to rest completely flat on the sample pan. This can be achieved by sanding or equivalent. Use care to minimize the introduction of mechanical stress, and that any sanding medium does not become embedded into the sample.

NOTE 1 Samples of the same mass but with a smaller surface area are likely to lose mass at a slower rate.

NOTE 2 It is recognized that different resin content of the samples is likely to yield different T_d results.

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