



**NSAI**  
Standards

Irish Standard  
I.S. EN 60068-2-83:2011

Environmental testing -- Part 2-83:  
Tests - Test Tf: Solderability testing of  
electronic components for surface  
mounting devices (SMD) by the wetting  
balance method using solder paste (IEC  
60068-2-83:2011 (EQV))

## I.S. EN 60068-2-83:2011

*Incorporating amendments/corrigenda issued since publication:*

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|   |  |   |
|---|--|---|
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| <b>NSAI</b><br>1 Swift Square,<br>Northwood, Santry<br>Dublin 9   | T +353 1 807 3800<br>F +353 1 807 3838<br>E standards@nsai.ie<br><br>W NSAI.ie | <b>Sales:</b><br>T +353 1 857 6730<br>F +353 1 857 6729<br>W standards.ie |
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EUROPEAN STANDARD

**EN 60068-2-83**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2011

ICS 19.040; 31.190

English version

**Environmental testing -  
Part 2-83: Tests -  
Test Tf: Solderability testing of electronic components for surface  
mounting devices (SMD) by the wetting balance method using solder  
paste  
(IEC 60068-2-83:2011)**

Essais d'environnement -  
Partie 2-83: Essais -  
Essais Tf: Essai de brasabilité des  
composants électroniques pour les  
composants pour montage en surface  
(CMS) par la méthode de la balance de  
mouillage utilisant de la pâte à braser  
(CEI 60068-2-83:2011)

Umweltprüfungen -  
Teil 2-83: Prüfungen -  
Prüfung Tf: Prüfung der Lötbarkeit von  
Bauelementen der Elektronik für  
Oberflächenmontage (SMD) mit der  
Benetzungswaage unter Verwendung von  
Lotpaste  
(IEC 60068-2-83:2011)

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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 CENELEC member.

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**CENELEC**

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

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

**I.S. EN 60068-2-83:2011**

EN 60068-2-83:2011

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**Foreword**

The text of document 91/975/FDIS, future edition 1 of IEC 60068-2-83, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60068-2-83:2011.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-07-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-10-12

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**Endorsement notice**

The text of the International Standard IEC 60068-2-83:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- |                |                                   |
|----------------|-----------------------------------|
| IEC 60068-2-69 | NOTE Harmonized as EN 60068-2-69. |
| IEC 61189-5    | NOTE Harmonized as EN 61189-5.    |

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u>   | <u>EN/HD</u>  | <u>Year</u> |
|--------------------|-------------|--|---------------|-------------|
| IEC 60068-1        | -           | Environmental testing -<br>Part 1: General and guidance  | EN 60068-1    | -           |
| IEC 60068-2-20     | 2008        | Environmental testing -<br>Part 2-20: Tests - Test T: Test methods for<br>solderability and resistance to soldering heat<br>of devices with leads  | EN 60068-2-20 | 2008        |
| IEC 60068-2-58     | -           | Environmental testing -<br>Part 2-58: Tests - Test Td: Test methods for<br>solderability, resistance to dissolution of<br>metallization and to soldering heat of surface<br>mounting devices (SMD) | EN 60068-2-58 | -           |
| IEC 60194          | -           | Printed board design, manufacture and<br>assembly - Terms and definitions  | EN 60194      | -           |
| IEC 61190-1-3      | -           | Attachment materials for electronic assembly -<br>Part 1-3: Requirements for electronic grade<br>solder alloys and fluxed and non-fluxed solid<br>solders for electronic soldering applications    | EN 61190-1-3  | -           |

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ENVIRONMENTAL TESTING –

**Part 2-83: Tests – Test Tf: Solderability testing  
of electronic components for surface mounting devices (SMD)  
by the wetting balance method using solder paste**

## 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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International Standard IEC 60068-2-83 has been prepared by IEC technical committee 91: Electronics assembly technology.

The text of this standard is based on the following documents:

|             |                  |
|-------------|------------------|
| FDIS        | Report on voting |
| 91/975/FDIS | 91/992/RVD       |

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

## INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents as indicated below.

IEC takes no position concerning the evidence, validity and scope of patent rights.

The holders of the patent rights have assured the IEC that they are willing to negotiate licences either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holders of these patent rights are registered with IEC. Information may be obtained as indicated below.

- a) EU patent 0920488.4 “Synchronous test method for assessing soldering pastes”<sup>1</sup>  
Gen3 Systems LTD  
Unit B2  
Armstrong Mall  
Farnborough GU14 0NR  
United Kingdom
- b) JP Patent 2630712 “Testing method of characteristics of solder paste and the equipment for the test”  
Malcom Co., Ltd  
4-15-10 Honmachi, Shibuya-ku  
Tokyo, 151-0071  
Japan
- c) Patent JP 3789041 “Solderability measuring apparatus”  
Patent JP 3552061 “Solderability tester and solderability test method”  
Patent JP 3498100 “Method and device for testing solderability and microcrucible for testing”  
Patent JP 3153884 “Measuring device for soldering performance of cream solder”  
Tarutin Kester Co., Ltd.  
2-20-11 Yokokawa,  
Sumida-ku  
Tokyo, 130-0003  
Japan
- d) Sony Corporation  
1-7-1 Konan Minato-ku  
Tokyo 108-0075  
Japan

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<sup>1</sup> Status of patent: Pending.

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