
Attachment materials for electronic assembly - Part 1-2: Requirements for solder pastes for high-quality interconnections in electronics assembly

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EUROPEAN STANDARD

EN 61190-1-2

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June 2002

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English version

Attachment materials for electronic assembly
Part 1-2: Requirements for solder pastes for high-quality
interconnections in electronics assembly
(IEC 61190-1-2:2002)

Matériaux de fixation pour
les assemblages électroniques
Partie 1-2: Exigences relatives aux
crèmes de brasage pour les
interconnexions de haute qualité
dans les assemblages de
composants électroniques
(CEI 61190-1-2:2002)

Verbindungsmaterialien für
Baugruppen der Elektronik
Teil 1-2: Anforderungen an Lotpaste für
hochwertige Verbindungen in der
Elektronikmontage
(IEC 61190-1-2:2002)

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This European Standard was approved by CENELEC on 2002-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 91/278/FDIS, future edition 1 of IEC 61190-1-2, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61190-1-2 on 2002-06-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-06-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annexes A and ZA are normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61190-1-2:2002 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 61191-1	NOTE	Harmonized as EN 61191-1:1998 (not modified).
IEC 61191-2	NOTE	Harmonized as EN 61191-2:1998 (not modified).
IEC 61191-3	NOTE	Harmonized as EN 61191-3:1998 (not modified).
IEC 61191-4	NOTE	Harmonized as EN 61191-4:1998 (not modified).
ISO 9000	NOTE	Harmonized as EN ISO 9000:2000 (not modified).
ISO 9001	NOTE	Harmonized as EN ISO 9001:2000 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 60194	1999	Printed board design, manufacture and assembly - Terms and definitions	-	-
IEC 61190-1-1	- ¹⁾	Attachment materials for electronic assembly Part 1-1: Requirements for soldering fluxes for high-quality interconnections in electronics assembly	EN 61190-1-1	2002 ²⁾
IEC 61190-1-3	- ¹⁾	Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solders for electronic soldering applications	EN 61190-1-3	2002 ²⁾
ISO 9002	- ¹⁾	Quality systems - Model for quality assurance in production, installation and servicing	EN ISO 9002	1994 ²⁾
ISO 9454-2	- ¹⁾	Soft soldering fluxes - Classification and requirements Part 2: Performance requirements	EN ISO 9454-2	2000 ²⁾

1) Undated reference.

2) Valid edition at date of issue.

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**Matériaux de fixation pour les
assemblages électroniques –**

**Partie 1-2:
Exigences relatives aux crèmes de brasage
pour les interconnexions de haute qualité
dans les assemblages de composants
électroniques**

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Attachment materials for electronic assembly –

**Part 1-2:
Requirements for solder pastes
for high-quality interconnections in
electronics assembly**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ATTACHMENT MATERIALS FOR ELECTRONIC ASSEMBLY –

Part 1-2: Requirements for solder pastes for high-quality interconnections in electronics assembly

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The 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 61190-1-2 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
91/278/FDIS	91/288/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 3.

Annex A forms an integral part of this standard.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

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

INTRODUCTION

This part of IEC 61190 defines the characteristics of solder paste through the definitions of properties and specification of test methods and inspection criteria. Materials include solder powder and solder paste flux blended to produce solder paste. Solder powders are classified as to shape of the particles and size distribution of the particles. It is not the intent of this standard to exclude particle sizes or distributions not specifically listed. For the flux properties of the solder paste, including classification and testing, see IEC 61190-1-1.

The requirements for solder paste are defined in general terms. In practice, where more stringent requirements are necessary, additional requirements may be defined by mutual agreement between the user and the supplier. Users are cautioned to perform tests (beyond the scope of this standard) to determine the acceptability of the solder paste for specific processes.

The standard is intended to be applicable to all types of solder paste as used for soldering in general and to soldering in electronics assembly. The solder pastes involved relate to all aspects of application. The generic specifications for solder pastes are given in ISO 9454.

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