

Attachment materials for electronic assembly —

Part 1-2: Requirements for soldering pastes for high-quality interconnects in electronics assembly

The European Standard EN 61190-1-2:2007 has the status of a
British Standard

ICS 31.190

National foreword

This British Standard is the UK implementation of EN 61190-1-2:2007. It is identical to IEC 61190-1-2:2007. It supersedes BS EN 61190-1-2:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/501, Electronic assembly technology.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**Attachment materials for electronic assembly -
Part 1-2: Requirements for soldering pastes
for high-quality interconnects in electronics assembly
(IEC 61190-1-2:2007)**

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 61190-1-2:2007)

Verbindungsmaterialien
für Baugruppen der Elektronik -
Teil 1-2: Anforderungen an Lotpaste
für hochwertige Verbindungen
in der Elektronikmontage
(IEC 61190-1-2:2007)

This European Standard was approved by CENELEC on 2007-05-01. 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.

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CENELEC

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

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Foreword

The text of document 91/646/FDIS, future edition 2 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 2007-05-01.

This European Standard supersedes EN 61190-1-2:2002.

The main changes with regard to EN 61190-1-2:2002 concern a definition of lead-free solder alloy and an explanation of solder ball test standards.

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) | 2008-02-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-05-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61190-1-2:2007 was approved by CENELEC as a European Standard without any modification.

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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 according to both shape and size distribution of the particles. It is not the intention of this standard to exclude those particle sizes or distributions not specifically listed. For flux properties of 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 supplier. Users are cautioned to perform tests (beyond the scope of this specification) to determine the acceptability of the solder paste for specific processes.

This standard is intended to be applicable to all types of solder paste used for soldering in general, as well as for soldering in electronics assembly. The solder pastes involved relate to all aspects of application. Generic specifications for soldering pastes are given in ISO 9454-2.

ATTACHMENT MATERIALS FOR ELECTRONIC ASSEMBLY –

Part 1-2: Requirements for soldering pastes for high-quality interconnects in electronics assembly

1 Scope

This part of IEC 61190 specifies general requirements for the characterization and testing of solder pastes used to make high-quality electronic interconnections in electronics assembly. This standard serves as a quality control document and is not intended to relate directly to the material's performance in the manufacturing process.

Related information on flux characterization, quality control and procurement documentation for solder flux and flux containing material may be found in IEC 61190-1-1.

2 Normative references

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.

IEC 60194, *Printed board design, manufacture and assembly – Terms and definitions*

IEC 61189-5, *Test methods for electrical materials, interconnection structures and assemblies – Part 5: Test methods for printed board assemblies*

IEC 61189-6, *Test methods for electrical materials, interconnection structures and assemblies – Part 6: Test methods for materials used in manufacturing electronic assemblies*

IEC 61190-1-1, *Attachment materials for electronic assembly – Part 1-1: Requirements for soldering fluxes for high quality interconnections in electronics assembly*

IEC 61190-1-3, *Attachment materials for electronic assembly – Part 1-3: Requirements for electronic grade solder alloys and fluxed and non-fluxed solid solders for electronic soldering applications*

IEC 61191-1, *Printed board assemblies – Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies*

IEC 61191-2, *Printed board assemblies – Part 2: Sectional specification – Requirements for surface mount soldered assemblies*

IEC 61191-3, *Printed board assemblies – Part 3: Sectional specification – Requirements for through-hole mount soldered assemblies*

IEC 61191-4, *Printed board assemblies – Part 4: Sectional specification – Requirements for terminal soldered assemblies*

ISO 9000, *Quality management systems – Fundamentals and vocabulary*

ISO 9001, *Quality management systems – Requirements*