
**Adhesives — Test methods for
isotropic electrically conductive
adhesives —**

**Part 5:
Determination of shear fatigue**

*Adhésifs — Méthodes d'essai pour adhésifs à conductivité électrique
isotrope —*

Partie 5: Détermination de la fatigue par cisaillement





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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

ISO 16525 consists of the following parts, under the general title *Adhesives — Test methods for isotropic electrically conductive adhesives*:

- *Part 1: General test methods*
- *Part 2: Determination of electric characteristics for use in electronic assemblies*
- *Part 3: Determination of heat-transfer properties*
- *Part 4: Determination of shear strength and electrical resistance using rigid-to-rigid bonded assemblies*
- *Part 5: Determination of shear fatigue*
- *Part 6: Determination of pendulum-type shear impact*
- *Part 7: Environmental test methods*
- *Part 8: Electrochemical-migration test methods*
- *Part 9: Determination of high-speed signal-transmission characteristics*

Adhesives — Test methods for isotropic electrically conductive adhesives —

Part 5: Determination of shear fatigue

SAFETY STATEMENT — Persons using this part of ISO 16525 should be familiar with normal laboratory practice. This part of ISO 16525 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any regulatory conditions.

IMPORTANT — Certain procedures specified in this part of ISO 16525 might involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

This part of ISO 16525 specifies test methods using miniature specimens to measure shear fatigue of a glued joint that consists of isotropic electrically conductive adhesives and rigid adherends in specified conditions.

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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 431, *Copper refinery shapes*

ISO 472, *Plastics — Vocabulary*

ISO 10365, *Adhesives — Designation of main failure patterns*

ISO 17212, *Structural adhesives — Guidelines for the surface preparation of metals and plastics prior to adhesive bonding*

3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO 472 and the following apply.

3.1

shear fatigue life

number of cycles of shear strain applied to the test specimen until adhesion layer failure is observed

3.2

maximum load

force generated through shear deformation of the specimen at the maximum test positions in each cycle