BSI Standards Publication

Adhesives - Determination of shear strength of anaerobic adhesives using pin-and-collar specimens

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National foreword

This British Standard is the UK implementation of EN ISO 10123:2019. It is identical to ISO 10123:2013. It supersedes BS EN 15337:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/52, Adhesives.

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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English Version

Adhesives - Determination of shear strength of anaerobic adhesives using pin-and-collar specimens (ISO 10123:2013)

Adhésifs - Détermination de la résistance au cisaillement des adhésifs anaérobies sur assemblage type axe-bague (ISO 10123:2013)

Klebstoffe - Bestimmung der Scherfestigkeit von anaeroben Klebstoffen unter Verwendung von Bolzen-Hülse-Probekörpern (ISO 10123:2013)

This European Standard was approved by CEN on 19 May 2019.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

The text of ISO 10123:2013 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10123:2019 by Technical Committee CEN/TC 193 "Adhesives" the secretariat of which is held by UNE.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15337:2007.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10123:2013 has been approved by CEN as EN ISO 10123:2019 without any modification.

Contents

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 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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*.

This second edition cancels and replaces the first edition (ISO 10123:1990), of which it constitutes a minor revision.

INTERNATIONAL STANDARD ISO 10123:2013

Adhesives - Determination of shear strength of anaerobic adhesives using pin-and-collar specimens

SAFETY STATEMENT — Persons using this International Standard should be familiar with normal laboratory practice, if applicable. This International Standard does not purport to address all of the safety concerns, 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 requirements.

1 Scope

This International Standard specifies a method for the determination of the shear strength of anaerobic-curing liquid adhesives used for retaining cylindrical assemblies, pin-and-collar type, or for locking and sealing threaded fasteners.

This test method can also be used for other adhesives.

The test is for ranking and quality control of adhesives. The result does not necessarily reflect the performance of the materials in service and the test is not suitable for providing numerical data for design purposes.

NOTE Numerical design data can be obtained from tests using the materials and configurations used in the actual structure.

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 683-9, *Heat-treatable steels, alloy steels and free-cutting steels — Part 9: Wrought free-cutting steels*

ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

3 Principle

The force required to shear the adhesive joint formed between a metal pin and a metal collar is determined. The static shear strength is calculated from this force.

4 Apparatus

4.1 Universal testing machine, complying with ISO 7500-1, class 1.

The machine shall be able to apply a compressive force directly or indirectly. An example of a jig for compression testing, which can be used to adapt a tensile testing machine, is shown in Annex A.

4.2 Test specimen support, made of hardened steel, as shown in Figure 1, for positioning the test specimen on the universal testing machine.

4.3 Non-adhering material sheet, e.g. polyethylene sheet.