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Structural adhesives - Characterization of a surface by measuring adhesion by means of the three point bending method

I.S. EN 1966:2009

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English Version

Structural adhesives - Characterization of a surface by measuring adhesion by means of the three point bending method

Adhésifs structuraux - Caractérisation d'une surface par mesure de l'adhérence au moyen de la méthode de la flexion en trois points

Strukturklebstoffe - Charakterisierung einer Oberfläche durch Messung der Adhäsion nach dem Dreipunkt-Biegeverfahren

This European Standard was approved by CEN on 27 December 2008.

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Foreword

This document (EN 1966:2009) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by AENOR.

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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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

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1 Scope

This European Standard describes a test method to determine ability of a cured adhesive (possibly with a primer) to adhere to a substrate which has had a certain surface finish or with a specific surface preparation by using the "three point bending method".

It is only used for quality assurance and the substrate should be rigid or resistant enough to bending such as steel or aluminium alloys. For other substrates the thickness should be adjusted to the modulus of elasticity or a suitable stiffener should be used.

The adhesive should be polymerisable (curable) without pressure in order to obtain the thickness needed to provide sufficient rigidity, otherwise, a bonded reinforcing piece of the same type and same thickness as the substrate can be substituted for the bloc of adhesive.

It is not suitable for film adhesives.

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.

EN 923:2005, *Adhesives — Terms and definitions*

EN 10025-2, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 13887, *Structural adhesives — Guidelines for surface preparation of metals and plastics prior to adhesive bonding*

EN ISO 291, *Plastics — Standard atmospheres for conditioning and testing (ISO 291:2005)*

EN ISO 9142, *Adhesives — Guide to the selection of standard laboratory ageing conditions for testing bonded joints (ISO 9142:2003)*

EN ISO 10365, *Adhesives — Designation of main failure patterns (ISO 10365:1992)*

ISO 286-1, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005 and the following apply.

3.1 interfacial zone
zone where the physical, chemical and mechanical properties are different from those of substrate, the adhesive or any coating applied before bonding

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