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I.S. EN 14294:2010

# Adhesives for leather and footwear materials - Preparation of bonded test pieces by moulding-on processes

## I.S. EN 14294:2010

*Incorporating amendments/corrigenda issued since publication:*

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English Version

## Adhesives for leather and footwear materials - Preparation of bonded test pieces by moulding-on processes

Adhésifs pour cuir et matériaux de la chaussure -  
Préparation d'éprouvettes collées par moulage direct sur  
tige

Klebstoffe für Leder und Schuhwerkstoffe - Herstellung von  
Verbund-Proben nach dem Anformverfahren

This European Standard was approved by CEN on 28 December 2009.

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## **Foreword**

This document (EN 14294:2010) 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of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010.

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.

This document supersedes EN 14294:2004.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

EN 15307 and EN 1392 specify methods of testing and evaluation of adhesives for leather and footwear materials in "stuck-on" assemblies. Most footwear produced in Europe is manufactured using stuck-on processes, but a significant proportion is produced by "moulding-on" processes such as vulcanising, injection moulding and reaction moulding.

This document specifies the preparation of bonded test pieces by moulding-on processes. The form and dimensions of the test pieces produced allows testing according to the test methods specified in EN 1392, and evaluation of the bond strength obtained according to EN 15307.

This document therefore complements the above mentioned series of documents, and together they allow the simulation, testing and evaluation of almost all bonds occurring in common footwear constructions.

## 1 Scope

This European Standard specifies procedures for the preparation of test pieces comprising adhesive coated leather or other footwear upper material onto which a soling material is moulded directly. The procedures described simulate direct vulcanising of rubber, injection moulding of thermoplastics and reaction moulding of polyurethane.

The prepared test pieces are suitable for the test procedures described in EN 1392, to meet the requirements of EN 15307.

**SAFETY STATEMENT—** Persons using this document should be familiar with the normal laboratory practice, if applicable. This document 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.

**ENVIRONMENTAL STATEMENT—** It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 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 1392:2006, *Adhesives for leather and footwear materials — Solvent-based and dispersion adhesives — Testing of bond strength under specified conditions*

EN 15307, *Adhesives for leather and footwear materials — Sole-upper bonds — Minimum strength requirements*

EN ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923:2005 and EN 1392:2006 and the following apply.

### 3.1

#### **moulding-on process**

process for soling footwear in which the soling material is directly moulded onto the bottom of the shoe in a mould closed by the shoe upper or other footwear component

NOTE The other footwear component can be an outsole or midsole onto which another soling layer is to be moulded.

### 3.2

#### **vulcanising**

moulding process in which uncured rubber is inserted or extruded into the mould and is shaped and crosslinked by heat and pressure

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