



**NSAI**  
Standards

Standard Recommendation  
S.R. CEN/TR 15990:2010

## Data Sheets - Footwear Tests Materials and Test Adhesives

## S.R. CEN/TR 15990:2010

*Incorporating amendments/corrigenda/National Annexes issued since publication:*  
CEN/TR 15990:2010/AC:2010

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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English version  
Version Française  
Deutsche Fassung

Data Sheets - Footwear Tests Materials and Test Adhesives

Fiches techniques - Matériaux et colles  
pour essais des articles chaussants

Datenblätter - Schuh-Testwerkstoffe und  
Schuh-Testklebstoffe

This corrigendum becomes effective on 24 November 2010 for incorporation in the official German and English versions of the EN.

Ce corrigendum prendra effet le 24 novembre 2010 pour incorporation dans les versions officielles allemande et anglaise de la EN.

Die Berichtigung tritt am 24. November 2010 zur Einarbeitung in die offizielle Deutsche und Englische Fassung der EN in Kraft.



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

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## 1 Modifications to Table 1

### Table 1, 3<sup>rd</sup> line

Replace the nominal tensile strength "> 350" with "> 21" and

### Table 1, 5<sup>th</sup> line

Replace "Ashes at 950 °C" with "Ashes at 800 °C" to read as follows:

**"Table 1 – Technical Data of Test Material L1**

| Technical Data           | Unit              | Nominal | ± Tolerance | Standard      |
|--------------------------|-------------------|---------|-------------|---------------|
| Apparent density         | g/m <sup>3</sup>  | 0,7     | 0,1         | EN ISO 2420   |
| Tensile strength         | N/mm <sup>2</sup> | > 21    | -           | EN ISO 3376   |
| Elongation at break      | %                 | Max. 80 | -           | EN ISO 3376   |
| Ashes at 800 °C          | %                 | 6,0     | 1,0         | EN ISO 4047   |
| Chrome oxide             | %                 |         | -           | EN ISO 5398-3 |
| pH-value                 | -                 | > 3,5   | -           | EN ISO 4045   |
| Dichloro methane extract | %                 | 8,0     | 2,0         | EN ISO 4048   |

."

## 2 Modifications to Table 2

### Table 2, 3<sup>rd</sup> line

Replace the nominal tensile strength "> 800" with "> 19" and

### Table 2, 5<sup>th</sup> line

Replace "Ashes at 950 °C" with "Ashes at 800 °C" to read as follows:

**"Table 2 – Technical Data of Test Material L2**

| Technical Data           | Unit              | Nominal   | ± Tolerance | Standard    |
|--------------------------|-------------------|-----------|-------------|-------------|
| Apparent density         | g/m <sup>3</sup>  | Max. 1,15 | -           | EN ISO 2420 |
| Tensile strength         | N/mm <sup>2</sup> | > 19      | -           | EN ISO 3376 |
| Elongation at break      | %                 | Max. 30   | -           | EN ISO 3376 |
| Ashes at 800 °C          | %                 | Max. 1,3  | -           | EN ISO 4047 |
| pH-value                 | -                 | > 3,5     | -           | EN ISO 4045 |
| Dichloro methane extract | %                 | Max. 2,0  | -           | EN ISO 4048 |

."

### 3 Modification to Table 3

#### Table 3, 6<sup>th</sup> line

Replace the nominal abrasion "> 210" with "< 210" to read as follows:

**"Table 3 – Technical Data of Test Material SBR**

| Technical Data      | Unit              | Nominal | ± Tolerance | Standard   |
|---------------------|-------------------|---------|-------------|------------|
| Raw density         | g/m <sup>3</sup>  | 1,17    | 0,02        | ISO 2781   |
| Tensile strength    | N/mm <sup>2</sup> | > 13    | -           | ISO 37     |
| Elongation at break | %                 | > 500   | -           | ISO 37     |
| Hardness            | °ShoreA           | 70      | 3           | EN ISO 868 |
| Abrasion            | mm <sup>3</sup>   | < 210   | 30          | ISO 4649   |
| Ashes at 950 °C     | %                 | 31,0    | 2,0         | ISO 247    |
| Acetone extract     | %                 | 6,0     | 0,5         | ISO 1407   |

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ICS 61.060; 83.180

English Version

## Data Sheets - Footwear Tests Materials and Test Adhesives

Fiches techniques - Matériaux et colles pour essais des articles chaussants

Datenblätter - Schuh-Testwerkstoffe und Schuh-Testklebstoffe

This Technical Report was approved by CEN on 28 December 2009. It has been drawn up by the Technical Committee CEN/TC 193.

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## **Foreword**

This document (CEN/TR 15990:2010) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by AENOR.

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.

## Introduction

For testing adhesive bonds some important European Standards have been developed by CEN/TC 193/Working Group 5 "Adhesives for Leather and Footwear" in close cooperation with European Shoe Institutes and the "Association of European Adhesive and Sealant Manufacturers (FEICA)":

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

EN 15062:2006, *Adhesives for leather and footwear materials — Solvent-based and dispersion adhesives — Testing ageing of bonds under specified conditions*

EN 15307:2007, *Adhesives for leather and footwear materials — Sole-upper bonds — Minimum strength requirement*

These European Standards intend to serve:

- the manufactures of shoe materials for testing the bondability of their products;
- the adhesive manufactures to determine the bond properties of their adhesives;
- the shoe industry to test the suitability of the materials and/or adhesives before applying in their production line and for quality control.

In the footwear industry a large number of different solvent or dispersion adhesives are applied for sole-upper bonding offering a broad range of technical effects. The most important and most often adhesives used are based on polyurethane and polychloroprene. For research, development and quality certification purposes some simply formulated 1- and 2-part "reference test adhesives" have been developed which can be considered as typical adhesives of these types. In footwear manufacture also a great number of the different sole and upper materials are used. From the most important and most often applied some materials have been selected as "reference test materials".

The annexed data sheets offer for each of these reference test adhesives and reference test materials some information and specify some properties. CEN/TC193 Working Group 5 takes care for a continuous updating of these data sheets. For further information on a reference test adhesive or a reference test material (e.g. on availability and supply) please contact the European Shoe Institute mentioned in its data sheet:

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

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