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Kaitserõivad. Materjalide vastupidavuse hindamine sulametalli pritsmete toimele

Protective clothing - Assessment of resistance of materials to molten metal splash

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN ISO 9185:2008 sisaldab Euroopa standardi EN ISO 9185:2007 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 27.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 01.07.2007.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 9185:2008 consists of the English text of the European standard EN ISO 9185:2007.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 01.07.2007.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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Võtmesõnad: individuaalne kaitsevarustus, kaitseriietus, kuumuskaitse, kuumuskindlad materjalid, projektsioon, sulametall (keevisõmbluse metall), testid, tulekindlad materjalid, viilimispuur

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English Version

**Protective clothing - Assessment of resistance of materials to
molten metal splash (ISO 9185:2007)**

Vêtements de protection - Évaluation de la résistance des
matériaux aux projections de métal fondu (ISO 9185:2007)

Schutzkleidung - Beurteilung des Materialwiderstandes
gegen flüssige Metallspritzer (ISO 9185:2007)

This European Standard was approved by CEN on 24 June 2007.

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Foreword

This document (EN ISO 9185:2007) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 94 "Personal safety - Protective clothing and equipment".

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 January 2008, and conflicting national standards shall be withdrawn at the latest by January 2008.

This document supersedes EN 373:1993.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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, 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 United Kingdom.

Annex ZA

(informative)

Relationship between this International Standard and the Essential Requirements of EU Directive 89/686/EEC

This International Standard has been prepared under a mandate given to CEN/CENELEC by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 89/686/EEC Personal Protective Equipment.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard, together with the requirements given in the specific product standard, confers, within the limits of the scopes of both standards, a presumption of conformity with the corresponding Essential Requirements of Directive 89/686/EEC, Annex II, clause 3.6.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

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Introduction

ISO 9185:1990 and EN 373:1995 have been used up until now with reasonable success as the principle test methods for materials used in the manufacture of clothing to protect against large splashes of molten metals. EN and ISO specifications cite these test methods and set levels of performance in terms of the mass of iron or aluminium that can be splashed onto test materials without producing damage to the heat sensor film.

The revision of the test methods contained within this International Standard incorporates changes based on experience that are intended to improve reproducibility and to respond to incident data from the aluminium smelter industry. A test procedure is therefore introduced to determine the protection provided by materials when splashed with molten cryolite. This revision also harmonises into one test procedure the previously slightly different procedures in ISO 9185 and EN 373 for testing with molten aluminium.

A new supply of PVC sensor film has been established together with a new world-wide distributor – see note in the text. One single specification for PVC film replaces the previously different ones in ISO 9185 and EN 373.

The test method in this International Standard is distinct from that in ISO 9150, which assesses the protective performance of materials intended to be manufactured into protective clothing for welding activities.

Protective clothing — Assessment of resistance of materials to molten metal splash

1 Scope

This International Standard specifies a method for assessing the heat penetration resistance of materials intended for use in clothing to protect against large splashes of molten metal. It provides specific procedures for assessing the effects of splashes of molten aluminium, molten cryolite, molten copper, molten iron and molten mild steel.

The principle of the test method is applicable to a wider range of hot molten materials than those for which specific procedures are set out, provided that appropriate measures are applied to protect the test operator. It is important to note that good resistance of a material to a pure molten metal does not guarantee a good performance against any slag that can be present in a manufacturing process.

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.

ISO 683-1:1987, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Direct-hardening unalloyed and low-alloyed wrought steel in form of different black products*

3 Terms and definitions

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

3.1

damage

(PVC sensor film) any smoothing or modification to the embossing or pinholing of the PVC sensor film, extending in total for at least 5 mm across its width

NOTE Where the visual change in appearance is in discrete spots, damage occurs when the summation of the width of each spot exceeds 5 mm across any horizontal section. For cryolite, experience indicates that damage can be defined as less than 5 mm in width, but greater than 10 mm in length.

3.2

molten metal splash index

figure equal to the minimum mass of molten metal poured which just causes damage to the PVC sensor film

4 Principle

Materials are tested by pouring quantities of molten metal onto the test specimen supported at an angle to the horizontal on a pin frame. Damage is assessed by placing an embossed thermoplastic PVC sensor film directly behind, and in contact with, the test specimen and noting changes to the film after pouring. Any adherence of the metal to the test specimen surface is also noted. Depending on the result, the test is repeated, using a greater or smaller mass of metal, until the minimum quantity to cause damage to the film is observed.