



SLOVENSKI STANDARD SIST EN ISO 12138:2000

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Tekstilije - Gospodinjsko pranje ploskovnih tekstilij pred preskušanjem gorljivosti (ISO 12138:1996)

Textiles - Domestic laundering procedures for textile fabrics prior to flammability testing
(ISO 12138:1996)

Textilien - Nichtgewerbliche Waschverfahren für Textilien vor der
Entflammbarkeitsprüfung (ISO 12138:1996)

Textiles - Méthodes de lavage domestique des étoffes en vue des essais d'inflammabilité
(ISO 12138:1996)

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Ta slovenski standard je istoveten z: EN ISO 12138:1996

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
59.080.30	Tkanine	Textile fabrics

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EUROPEAN STANDARD

EN ISO 12138

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 1996

ICS 13.220.40; 59.080.30

Descriptors: see ISO document

English version

**Textiles - Domestic laundering procedures for
textile fabrics prior to flammability testing
(ISO 12138:1996)**

Textiles - Méthodes de lavage domestique des
étoffes en vue des essais d'inflammabilité
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This European Standard was approved by CEN on 1996-12-05. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

The text of the International Standard ISO 12138:1996 has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

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 June 1997, and conflicting national standards shall be withdrawn at the latest by June 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 12138:1996 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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INTERNATIONAL
STANDARD

ISO
12138

First edition
1996-12-15

**Textiles — Domestic laundering procedures
for textile fabrics prior to flammability
testing**

*Textiles — Méthodes de lavage domestique des étoffes en vue des essais
d'inflammabilité*

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Reference number
ISO 12138:1996(E)

EN ISO 12138 : 1996**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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 12138 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 2, *Cleansing, finishing, and water resistance tests*.

Annex A forms an integral part of this International Standard. Annexes B and C are for information only.

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Descriptors: textiles, fabrics, textile finishing, flammability, tests, flammability testing, washing.

Introduction

The methods specified in this International Standard provide standardized domestic laundering procedures for use prior to assessing the likely flammability behaviour of textile materials. The methods are based on ISO 6330 but incorporate several additional features which ensure that certain critical parameters are more closely controlled. Alternative procedures for commercial laundering prior to assessing the flammability of textile fabrics are given in ISO 10528.

Because of the wide variety of laundering methods used domestically, it is impossible to specify a standard laundering procedure which will reproduce the effect of laundering under all possible conditions. The methods specified, however, can be used to detect which materials are adversely affected by domestic laundering under conditions which are appropriate for the material being laundered. Such adverse effects are not restricted to textiles which have been treated with flame retardants.

The flammability of textile materials can be affected by a combination of different results:

- shrinkage of the material, causing an increase in mass per unit area;
- abrasion of the material, causing a decrease in mass per unit area;
- removal of finishes;
- chemical modification of the fibre or finish;
- deposition of hard-water salts;
- including application of softeners in the rinse cycle.

The various factors in these test methods are controlled in order to standardize all these effects as far as possible. The essential features specified in the methods are:

- a) water hardness;

A medium water-hardness level is specified in order to ensure that any major effects caused by deposition or chemical modification are detected. Different procedures for preparing this hard water are given, depending on the hardness of the initial water supply.

- b) degree of loading and composition of load;

These factors influence the mechanical action of the washing machine and the deposition results.

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c) volumes of liquor used for washing and rinsing;

The liquor:fabric ratio affects the mechanical action and the deposition results. In addition, it is essential to know the volumes of water being used in order to make any necessary adjustments to the water hardness.

d) type and quantity of detergent;

The use of a standard nonphosphate detergent containing sodium perborate and a bleach activator is recommended because of the increasing use of this type of detergent. The detergent used shall be agreed between the interested parties. The detergent can affect the chemical modification of a material or finish by its bleaching action, and also affects the deposition because of the sequestering effect of the nonphosphate builders included in the formulation.

e) wash temperatures;

Four standard wash temperatures are specified so that the appropriate temperature for the material being laundered can be selected.

NOTE — The combination of hard water and high perborate detergent used in this International Standard is not suitable for laundering flame-retardant materials at temperatures above 60 °C.

f) degree of agitation;

The heating period can vary considerably depending on the inlet water temperature and the heating capacity of the washing machine. Reduced agitation is used during filling and heating in order to avoid variations in mechanical action. Normal agitation is specified for the 12-min washing period for washes at 50 °C and 60 °C, but reduced agitation is used during the washing period for 30 °C and 40 °C washes.

g) rinsing procedure;

A standard rinsing procedure is specified, as rinsing can have considerable influence on the deposition of hard-water salts. Fabric softeners added to the rinse are not used in this method.

h) washing machine.

The methods as presented allow the use of two different types of washing machine. As far as possible the same laundering conditions have been specified for each type of machine. The degree of loading is 60 g per litre of drum volume, and the detergent quantity is 20 g per kilogram of wash load. For horizontal drum machines (Type A), the liquor:fabric ratio is 5,0:1,0 for washing and 9,0:1,0 for rinsing.

The mechanical action and the liquor:fabric ratio (20:1) used in the vertical drum machine (Type B) are different from those used in the Type A machines. Experience indicates that testing with this type of machine is equally effective in detecting finish removal, although mechanical effects and deposition results may be different.

Textiles — Domestic laundering procedures for textile fabrics prior to flammability testing

1 Scope

This International Standard specifies methods for repeated domestic laundering at selected wash temperatures prior to assessing flammability behaviour of textile materials. The washing machines and procedures specified are based on those given in ISO 6330, but specific requirements are provided for water hardness and volumes, detergent type and quantity, machine loading and degree of agitation.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6330:1984, *Textiles — Domestic washing and drying procedures for textile testing*.

3 Apparatus and reagents

3.1 Washing machine, automatic, of type A1, A2 or B as specified in ISO 6330 and as agreed between the interested parties.

3.2 Water, having a hardness of 160 mg/litre \pm 40 mg/litre, expressed as calcium carbonate, obtained by one of three methods:

- a) using a water supply having an initial hardness within the range 120 mg/litre to 200 mg/litre
- b) using a water supply having an initial hardness greater than 200 mg/litre and then diluted by the procedure given in A.1 with the appropriate amount of water of hardness less than 120 mg/litre;
- c) using a water supply having an initial hardness of less than 120 mg/litre and then artificially hardened by the procedure given in A.2 before addition to the washing machine.

3.3 Ballast, consisting of rectangular pieces in single layers of either woven 100 % bleached cotton or 100 % polyester. Each piece shall measure at least 350 mm \times 500 mm and shall be hemmed along the cut edges to prevent unravelling.