National Standards Authority of Ireland

IRISH STANDARD

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ICS 59.080.40

RUBBER- OR PLASTIC-COATED FABRICS - DETERMINATION OF RESISTANCE TO LIQUIDS

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EUROPEAN STANDARD

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English version

Rubber- or plastic-coated fabrics - Determination of resistance to liquids

Supports textiles revêtus de caoutchouc ou de plastique - Détermination de la résistance aux liquides

Mit Kautschuk oder Kunststoff beschichtete Textilien - Bestimmung der Flüssigkeitsbeständigkeit

This European Standard was approved by CEN on 23 June 2001.

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 Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPAISCHES KOMITEE FUR NORMUNG

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Foreword

This European Standard has been prepared by 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of an identical text or by endorsement, at the latest by February 2002, and conflicting national standards shall be withdrawn at the latest by February 2002.

EN 12759 contains two informative annexes : annex A, which gives examples of test liquids, and annex B which suggests a range of possible test temperatures.

This standard includes a Bibliography.

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

1 Scope

This European Standard describes two methods of evaluating the resistance of fabrics coated with plastics or with vulcanised rubber to the action of liquids by measurement of selected properties of the materials before and after immersion in selected liquids.

The methods described in this European Standard concern the following determinations :

a) Method 1 : Change of physical properties after immersion in test liquids

b) Method 2 : Change of physical properties after exposure and evaporation of volatile test liquids.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 2231 Rubber- or plastics-coated fabrics - Standard atmospheres for conditioning and testing (ISO 2231:1989)

EN ISO 2286-1 Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 1: Methods for determination of length, width and net mass (ISO 2286-1:1998)

3 Principle

This European Standard provides a procedure for exposing test specimens to the influence of liquids under defined conditions of temperature and time. Selected properties are determined according to the relevant European or International Standards. Test specimens are then immersed in selected liquid(s) and the properties determined again. The percentage change or the values before and after immersion are measures of the resistance of the material to the selected liquid(s).

4 Test liquids for methods 1 and 2

As commercial liquids may not have an entirely constant composition, a standard immersion liquid consisting of well-defined chemical compounds or mixture of compounds shall be used. Some suitable liquids are recommended in annex A (informative).

When a commercial liquid is used, the test report shall mention all the available information about its origin, composition, properties, e.g. viscosity, aniline point, etc., and batch number.

NOTE For test purpose, it is usually desirable to use the liquid(s) with which the coated fabric will come into contact during use. When testing to determine the effect of chemical solutions, the concentration of the solutions should be appropriate to the proposed application.

WARNING Appropriate safety precautions should be taken when preparing and handling test liquids, especially those known to be toxic, corrosive or flammable. Products giving off fumes should be handled only under an efficiently ventilated hood, corrosive products should not be allowed to come into contact with the skin or ordinary clothing, and flammable products should be kept away from any source of ignition.

In addition, attention is drawn to the possible damaging of test equipment (e.g. clamps or jaws) when using corrosive test liquids.

5 Test conditions for methods 1 and 2

5.1 Temperature

Use a test temperature approximating those found during use. Maintain the test temperature (T) at $T \pm 2$ °C.

Unless otherwise specified or agreed upon, test temperature (T) should be one of the standard temperatures given in annex B.

5.2 Immersion period

The following immersion periods are recommended :

22 h ± 0,25 h ; 46 h ± 0,25 h ; 72 h ± 2 h ; 168 h ± 2 h ; multiples of 7 days ± 2 h.

NOTE When testing for changes in physical properties, it is advisable to use such a period of immersion that equilibrium is allowed to be reached. To define this equilibrium, it is recommended to carry out preliminary measurements with several periods of immersion, recording the results as a function of time. Whenever practicable, the total immersion period should be chosen to extend far beyond the point of maximum variation.

5.3 Light

Immersion tests shall be conducted in the absence of direct light.

5.4 Time lapse between manufacturing and testing

The minimum time lapse between manufacturing and testing shall be 16 h.