BRITISH STANDARD

BS EN
25978 : 1993
BS 3424 :
Part 11 : 1993
ISO 5978 : 1990

Rubber- or plastics-coated fabrics — Determination of blocking resistance

The European Standard EN 25978 : 1993 has the status of a British Standard

Supports textiles revêtus de caoutchouc ou de plastique — Détermination de la résistance au blocage

Gummi oder Kunststoffbeschichtete Textilien — Bestimmung des Blockwiderstandes

UDC 677.077.65 : 687.066 : 677.017.424.25 : 620.1

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United Kingdom	British Standards Institution

This British Standard, having been prepared under the direction of the Plastics and Rubber Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on
15 November 1993

The following BSI references relate to the work on this standard:
Committee reference PRM/78
Special announcement in *BSI News* February 1993

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Amendments issued since publication

Amd. No.	Date	Text affected

Contents

National foreword

This British Standard has been prepared under the direction of the Plastics and Rubber Standards Policy Committee and is the English language version of EN 25978 : 1993, published by the European Committee for Standardization (CEN). It supersedes BS 3424 : Part 11 : 1982 which is withdrawn.

In 1993 the European Committee for Standardization (CEN) accepted ISO 5978 : 1990 as European Standard EN 25978 : 1993. As a consequence of implementing the European Standard BS 3424 : Part 11 is renumbered as BS EN 25978 : 1993. This edition makes no technical changes to the standard.

The standard was developed by Working Group WG13 of Technical Committee ISO/TC45, Rubber and Rubber Products. Attention is drawn to national annex NA concerning stacking of single-face coated fabrics for testing.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 25978

September 1993

UDC 677.077.65 : 687.066 : 677.017.424.25 : 620.1

Descriptors: Textiles, coated fabrics, fabrics coated with rubber, fabrics coated with plastics, adhesion tests

English version

Rubber- or plastics-coated fabrics — Determination of blocking resistance

(ISO 5978 : 1990)

Supports textiles revêtus de caoutchouc ou de plastique — Détermination de la résistance au blocage
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Gummi oder Kunststoffbeschichtete Textilien — Bestimmung des Blockwiderstandes
(ISO 5978 : 1990)

This European Standard was approved by CEN on 1993-04-05. 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.

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 Central Secretariat has the same status as the official versions.

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

CEN

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

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

Foreword

This European Standard is the endorsement of ISO 5978. Endorsement of ISO 5978 was recommended by CEN/TC 248 'Textiles and textile products' under whose competence this European Standard will henceforth fall.

This European Standard shall be given the status of national standard, either by publication of an identical text or by endorsement, at the latest by March 1994, and conflicting national standards shall be withdrawn at the latest by March 1994.

The Standard was approved and in accordance with the CEN/CENELEC Internal Regulations, 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, United Kingdom.

Introduction

Blocking tests at elevated temperatures are designed to estimate the relative resistance of rubber- or plastics-coated fabrics to blocking. For this purpose, the coated fabric is subjected to a specified load over a defined area at a specific temperature.

Rubber- or plastics-coated fabrics — Determination of blocking resistance

1 Scope

This International Standard specifies a method for the determination of the resistance of rubber- or plastics-coated fabrics to blocking.

The method specified is acceptable in most cases. If it is desired to use conditions other than those specified, these may be mutually agreed between the contracting parties but such variations shall be stated in the test report.

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 2231:1989, *Rubber- or plastics-coated fabrics — Standard atmospheres for conditioning and testing.*

3 Definition

For the purposes of this International Standard, the following definition applies.

blocking: An unintentional adherence between materials.

[Definition taken from ISO 472:1988, *Plastics — Vocabulary.*]

4 Apparatus

4.1 Glass plates, measuring approximately 150 mm x 150 mm x 3 mm.

4.2 Weight-piece, of mass 5,0 kg.

4.3 Circulating-air oven, of such a size that the total volume of the test assemblies does not exceed 10 % of the free space in the oven.

Provision shall be made for placing the test assemblies on shelves so they are not less than 50 mm from each other or from the sides of the oven.

The nature of the source of heat is optional but the source shall be located in the air supply of the oven.

Provision shall be made for circulation of air through the oven at a rate such as to provide a minimum of six air changes per hour.

The temperature of the oven shall be thermostatically controlled to maintain the temperature of the test assemblies within ± 2 °C of the specified temperature.

Baffles shall be used as required to prevent overheating and dead-spots.

5 Time interval between manufacture and testing

5.1 For all purposes, the minimum time between manufacture and testing shall be 16 h.

5.2 For non-product tests, the maximum time between manufacture and testing shall be four weeks, and for evaluations intended to be comparable, the tests, as far as possible, shall be carried out after the same time interval.

5.3 For product tests, whenever possible, the time between manufacture and testing shall not exceed three months. In other cases, tests shall be made within two months of the date of receipt by the customer.

6 Samples and test pieces

6.1 Samples shall be taken not less than 1 m from the end of the roll.

6.2 The test pieces for each sample to be tested shall consist of six specimens, each 150 mm × 150 mm.

6.3 Test pieces shall be representative of the material being tested. They shall be taken from the working width of the sample. They shall be cut with one edge parallel to the longitudinal axis of the sample.

The longitudinal and lateral axes shall be maked on the test pieces.

7 Conditioning of test pieces

The test pieces shall be conditioned in one of the standard atmospheres as defined in ISO 2231.

8 Procedure

8.1 Arrange the test pieces in pairs, back to back, face to face and back to face, to form a pile 150 mm square. Place the test pieces thus arranged between two glass plates (4.1). Place the 5,0 kg weight-piece (4.2) on the top plate in a position to ensure an even distribution of pressure.

8.2 Expose the test assembly for 3 h at a temperature of 70 °C ± 2 °C in the oven (4.3).

8.3 At the end of the exposure period, remove the test assembly from the oven, immediately take the test piece from between the plates and allow it to cool for 1 h. Then carefully separate the test pieces and examine them for adherence or peeling of the coatings.

8.4 Rate the resistance of each test piece to blocking by the scale given below:

1 — No blocking: coated surfaces separate without any evidence of adhering.

2 — Slight blocking: some adherence of coated surfaces takes place on separation, but without detriment to the coating.

3 — Blocking: coated surfaces are difficult to separate; the coating or part of the coating is removed during separation.

9 Test report

The test report shall include the following particulars:

a) a reference to this International Standard;

b) all details necessary for the identification of the sample;

c) the conditioning atmosphere used (see clause 7);

d) the total mass on the test piece;

e) the rating for resistance to blocking, in accordance with 8.4;

f) any departure from the procedure specified.

National annex NA (informative)
Stacking of single-face test pieces

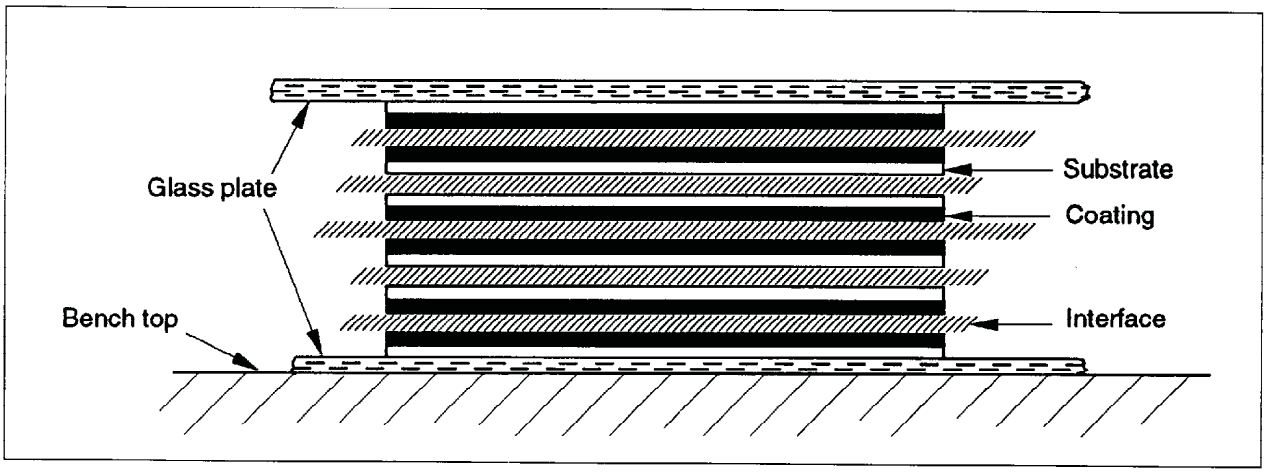
Clause **8.1** requires the test pieces to be arranged in pairs, as follows:

Back/back
Face/face
Back/face

and then stacked to form a pile.

If single-face coated fabrics are being tested, this can result in either one or two coating to coating interfaces, depending upon how the pairs of test pieces are stacked. Therefore, if single-face coated fabrics are being tested it is recommended that the six test pieces selected according to **6.2** be arranged as follows prior to placing them between the two glass plates (see **8.1**) so as to provide three coating to coating interfaces.

If the coated fabric is double textured it is not normally necessary to conduct a blocking test, but if the textile material is of an open structure or there is any suspicion that the coating polymer interlayer is not properly fused or cured, a blocking test at ambient temperature, but using the weight-piece specified in **4.2**, may be a useful indicator.



National annex NB (informative)

Committees responsible

The United Kingdom participation in the preparation of this European Standard was entrusted by the Plastics and Rubber Standards Policy Committee (PRM/-) to Technical Committee PRM/78, upon which the following bodies were represented:

British Nonwovens Manufacturers' Association
British Plastics Federation
British Railways Board
British Resin Manufacturers' Association
British Rubber Manufacturers' Association Ltd.
British Textile Confederation
British Textile Technology Group
Department of Health
Department of the Environment: Building Research Establishment
Furniture Industry Research Association
Home Office
Industrial Safety (Protective Equipment) Manufacturers' Association
Made-up Textiles Association
Ministry of Defence
RAPRA Technology Ltd.
SATRA Footwear Technology Centre
Society of Motor Manufacturers and Traders Ltd.
British Coal Corporation
Coopted member

National annex NC (informative)

Cross-references

Publication referred to	Corresponding British Standard
ISO 472 : 1988	BS 1755 *Glossary of terms used in the plastics industry*
	Part 1 : 1982 *Polymer and plastics technology*
ISO 2231 : 1989	BS 3424 *Testing coated fabrics*
	Part 2 : 1992 *Method 4. Pre-conditioning and conditioning of coated fabrics for testing purposes*

BS EN 25978 : 1993
BS 3424 : Part 11 : 1993
ISO 5978 : 1990

BSI — British Standards Institution

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