

Fire blankets

The European Standard EN 1869 : 1997 has the status of a
British Standard

ICS 13.220.10

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee FSH/2, Fire extinguishers, to Subcommittee FSH/2/13, Fire blankets, upon which the following bodies were represented:

- British Fire Consortium
- British Leather Confederation
- Chief and Assistant Chief Fire Officers Association
- Consumer Policy Committee of BSI
- Department of the Environment (Building Research Establishment)
- Fire Extinguishing Trades Association
- Home Office
- International Wool Secretariat
- London Fire and Civil Defence Authority
- Loss Prevention Council
- Marine Safety Agency
- Ministry of Defence
- Society of Motor Manufacturers and Traders Ltd.

This British Standard, having been prepared under the direction of the Consumer Products and Services Sector Board, was published under the authority of the Standards Board and comes into effect on 15 May 1997

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Amendments issued since publication

Amd. No.	Date	Text affected

The following BSI references relate to the work on this standard:
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National foreword

This British Standard has been prepared by Subcommittee FSH/2/13 and is the English language version of EN 1869 : 1997 *Fire blankets* published by the European Committee for Standardization (CEN).

EN 1869 was produced as a result of international discussion in which the United Kingdom took an active part.

EN 1869 : 1997 supersedes the requirements of BS 6575 : 1985 covering light-duty fire blankets. The scope of BS 6575 : 1985 is currently being revised to cover heavy-duty fire blankets only. On publication of the revised standard, BS 6575 : 1985 will be withdrawn.

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

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 6, an inside back cover and a back cover.

ICS 13.220.10

Descriptors: Fire fighting equipment, fire blankets, disposable equipment, specifications, classifications, composition: properties, marking, fire tests, electrical resistance

English version

Fire blankets

Couvertures anti-feu

Löschdecken

This European Standard was approved by CEN on 1996-12-19. 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 has been prepared by Technical Committee CEN/TC 70, Manual means of fire fighting equipment, the secretariat of which is held by IBN.

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

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Introduction

Some materials used for fire blankets may be degraded or even burn on prolonged contact with flame but the committee consider that this should not restrict the use, for the purposes described here, of materials which meet the performance requirements of this standard.

A test for electrical resistance of the complete fire blanket is given to ensure that in the event of use where live electrical equipment is concerned, the potential for an electrical shock is minimized.

In addition to the performance requirements specified in this standard it is recommended that fire blankets be suitably treated where necessary to give adequate resistance to attack by micro-organisms and insects throughout the design life.

1 Scope

This standard specifies requirements for fire blankets which are not re-useable and that are intended for use by one person. It is applicable to fire blankets primarily intended for extinguishing cooking oil fires.

NOTE. It is anticipated that they can also be used on fires involving personal clothing.

2 Definitions

For the purposes of this European Standard the following definition applies.

Fire blanket

A flexible sheet of material intended to be used to extinguish small fires by smothering.

3 Construction

3.1 A fire blanket shall be formed of one sheet of material, or two or more sheets of material each of a size equal to the overall size of the fire blanket, which are stitched together. The two sides shall be similar in performance.

There shall be no seams in the fire blanket except as follows if required:

- a) where the hand-holding devices are fixed; and
- b) at any edge.

3.2 Hand holding devices shall not comprise loops, they shall not be flammable, and shall not become detached from the fire blanket during any of the testing specified in this standard.

3.3 Fire blankets shall be rectangular or square and no edge shall be less than 0,9 m or more than 1,8 m.

3.4 The total mass of any fire blanket shall not exceed 4,5 kg.

3.5 Fire blankets shall be capable of being rolled completely around a $(50 + 2)$ mm diameter bar, and along any axes parallel to adjacent sides, without permanent deformation.

3.6 When stowed or packed in accordance with the manufacturer's instructions, it shall be possible for a fire blanket to be taken from the stowed position, unfolded, and held ready for use in not more than 4 s. The force required to remove the fire blanket shall not exceed 80 N.

3.7 When tested in accordance with annex B, the electrical resistance of the blanket material shall be not less than 1 M Ω at any point.

3.8 The edges of the fire blankets shall not fray or tear during any of the tests specified in annexes A to C.

4 Fire performance

4.1 When tested in accordance with annex C, the fire blanket shall be capable of extinguishing the cooking oil fire as described in annex C using the (345 ± 5) mm diameter tray, see figure C.1 for details.

4.2 The fire blanket shall remain whole and not ignite during the test.

5 Marking

5.1 Each blanket shall be indelibly marked with the manufacturer's or supplier's name and address, the number EN 1869 and year of this standard and the model or type number.

5.2 The container shall be marked with the following in white lettering on a red background.

These markings shall be visible when the container is fixed in position.

- a) The words FIRE BLANKET in letters not less than 20 mm high.
- b) Model or type number.
- c) The instruction 'DISCARD AFTER USE'.
- d) Instructions for use incorporating pictograms and including an instruction to 'cover burning material completely', 'switch off heat' and 'leave covered until cool'.

5.3 Either the reverse of the container or a leaflet shall be marked with the following.

- a) The number of this European Standard.
- b) Instructions prescribing an annual service.
- c) Blanket size in metres by metres.
- d) Folding instructions.

Annex A (normative)

Test requirements

A.1 Except where otherwise specified, tests shall be carried out at a temperature of $(20 \pm 10) ^\circ\text{C}$.

A.2 All tests shall be carried out using a single thickness of the fire blanket. Each fire blanket shall be tested separately.

A.3 A minimum of three fire blankets shall be tested. Identify and mark the blankets as 1 to 3 and the two sides as 'a' or 'b'. Two of the blankets shall be tested on side a, and one on side b.

A.4 The fire blanket shall be conditioned in air at $(20 \pm 10) ^\circ\text{C}$, at a relative humidity of $(60 \pm 10) \%$ for 48 h before testing. After this period of time, the fire blanket shall not be exposed to a different atmosphere for more than 5 min.

A.5 The fire blankets shall be stored for testing in their containers or stowage position for a minimum of 24 h immediately prior to testing.

Annex B (normative)

Electrical resistance test

B.1 Principle

The electrical resistance of the blanket fabric is measured between a negative electrode formed by a metal table top and positive electrode formed by a flat rectangular conducting plate.

B.2 Apparatus

B.2.1 *Table*, with metal top to be negative electrode.

B.2.2 *Megohmmeter* 500 V d.c.

B.2.3 *Flat conducting rectangular plate*, 450 mm \times 150 mm incorporating an insulated handle and having a total mass of $(5,0 \pm 0,25)$ kg.

NOTE. A stainless steel plate will be adequate.

B.3 Procedure

Arrange the apparatus as shown in figure B.1. Lay the blanket flat on the table and measure its electrical resistance using the megohmmeter in accordance with the manufacturer's instructions. Move the electrode and blanket as necessary to test the whole of the blanket.

Annex C (normative)

Fire performance test

NOTE. Attention is drawn to the necessity for taking precautions to safeguard the health of personnel conducting the test against the risk of fire, spillage of the hot oil and the inhalation of smoke or toxic products of combustion.

C.1 Materials and apparatus

C.1.1 *Fuel*. The fuel shall be an edible cooking oil, free from additives, with an auto-ignition temperature in the range of $350 ^\circ\text{C}$ to $370 ^\circ\text{C}$. 3 l of fresh fuel shall be used for each test.

NOTE. Edible Soya bean oil which conforms to CODEX STAN 20-1981 or a Rapeseed oil which conforms to CODEX STAN 24-1981.¹⁾

C.1.2 *Fuel tray*, of internal diameter (345 ± 5) mm and depth (100 ± 5) mm, and free from residue from previous tests.

C.1.3 *Table*, 0,8 m high, and larger than the fire blanket size.

C.1.4 *Tray support stand*, see figure C.1.

C.2 Procedure

C.2.1 Place the test tray centrally on the tray support stand, which shall itself be placed on the table equidistant from two opposite sides, and so that the distance from one of the other sides to the far edge of the tray is (650 ± 5) mm. See figure C.1.

C.2.2 The fire performance test shall be conducted in a room free from draughts, and with sufficient ventilation to allow the fire to develop freely and to remove products of combustion. The ambient temperature shall be between $0 ^\circ\text{C}$ and $30 ^\circ\text{C}$.

C.2.3 Place the fuel in the tray and, using a gas burner centrally positioned under the tray, heat the oil so that its temperature, measured centrally, increases at about $10 ^\circ\text{C}/\text{min}$ and self-ignites within 25 min to 35 min. Turn off the gas supply. Allow the fire to burn freely for 2 min after ignition, and then position the fire blanket fully opened over the tray, so that the centre point of the fire blanket is close to the centre of the tray.

Subsequently adjust the position of the blanket as seems necessary from any side of the table.

Remove the blanket 17 min after ignition and observe whether the fire is extinguished. The fire is considered to be extinguished if there are:

- no visible flames after removal of the blanket; and
- no re-ignition within 3 min of removal of the blanket.

Some fuel shall remain at the end of the test, i.e. the fire shall be extinguished and not merely starved of fuel.

Annex D (informative)

Bibliography

CODEX STAN: 20-1981	Codex standard for edible Soya Bean oil
CODEX STAN: 24-1981	Codex standard for Rapeseed oil

¹⁾ Published by the Joint Food and Agricultural Organization of the United Nations/World Health Organization, Codex Alimentarius Commission, Via Del Terme Di Caracalla 1-00100 Roma, Italy.

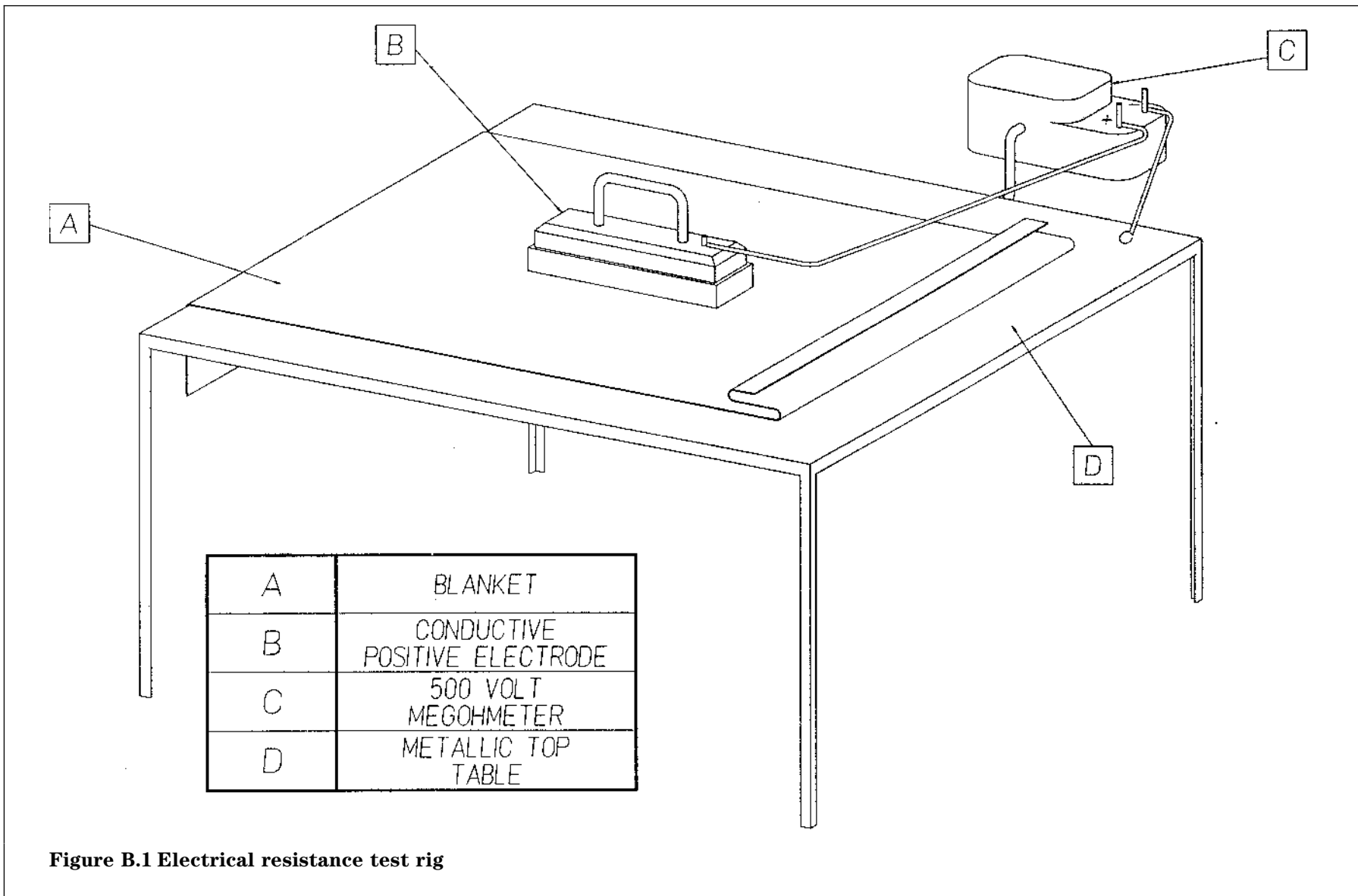
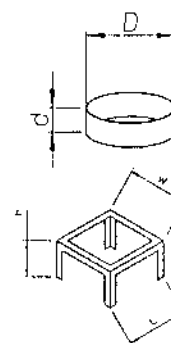
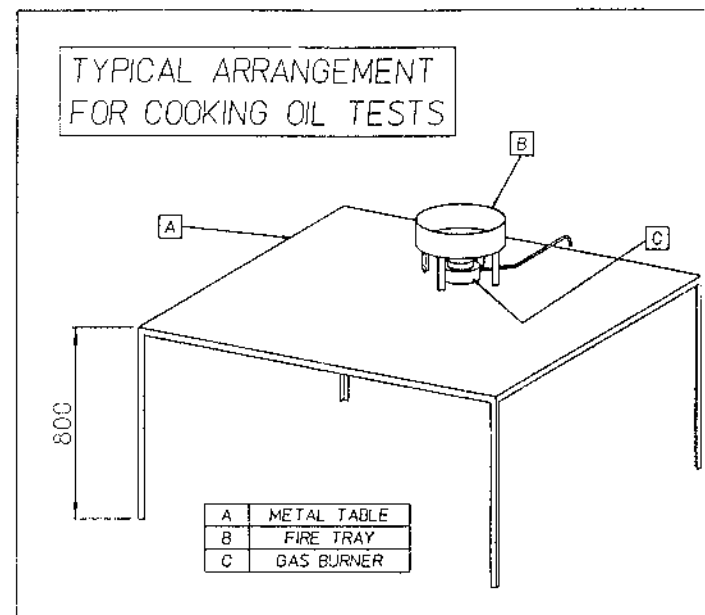


Figure B.1 Electrical resistance test rig



Fire Tray Dimensions:-	
Tray Diameter D INT	345±5mm
Tray Depth d INT	100±5mm

Tray support stand dimensions:-	
Material	25mm x 25mm L Section
Height (h)	140±5mm
Length (L)	240±5mm
Width (w)	240±5mm

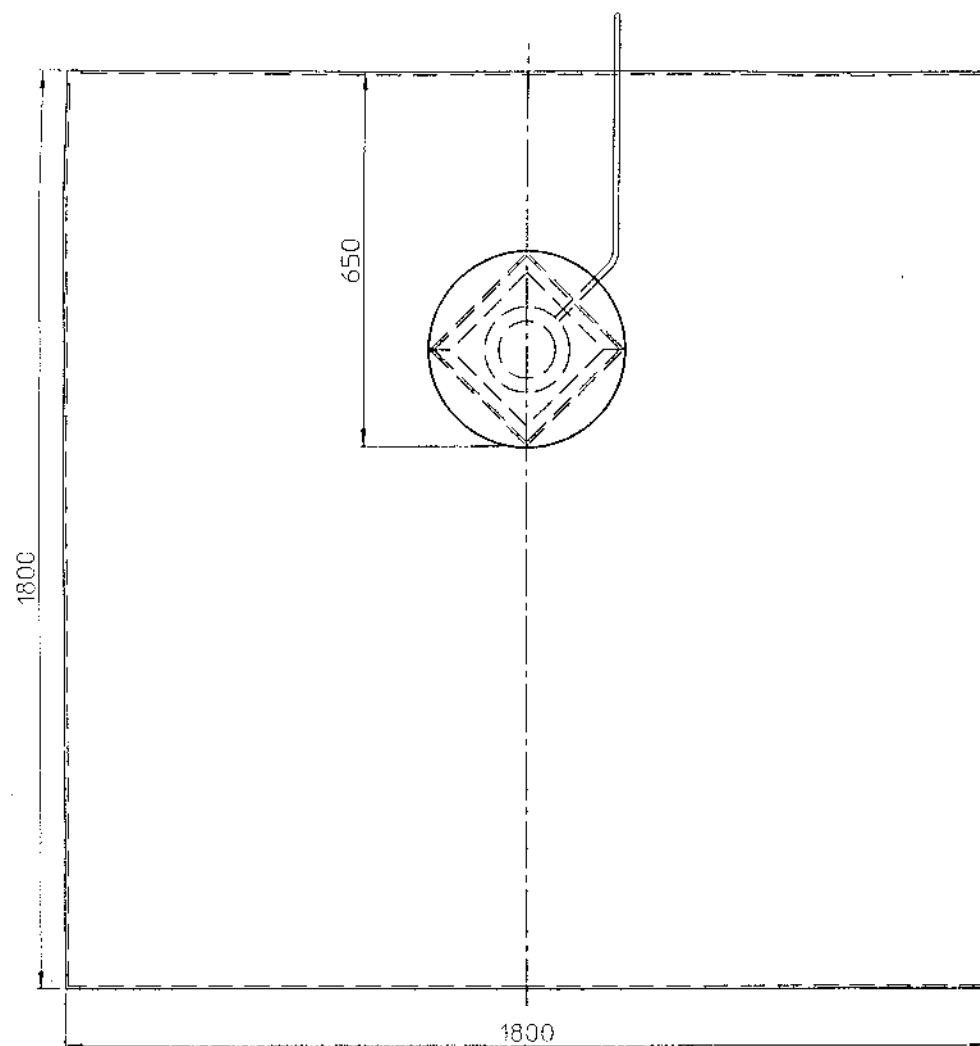


Figure C.1 Cooking oil test rig set up

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