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British Standard Specification for

# Interlinings

Part 3. Woven and knitted fusible interlinings

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Doublures intermédiaires  
Partie 3. Doublures intermédiaires fusibles tissées et tricotéesZwischenfutter  
Teil 3. Gewebte und gestrickene fusible Zwischenfutter

## Foreword

A comprehensive range of traditional fabric constructions is contained in BS 4560 'Linings and interlinings for uniform clothing'. User trials by hospital and fire brigade staffs have encouraged the adoption of a specification for non-traditional constructions. The latter are being published as Parts of BS 4973 as follows.

- Part 1 Nonwoven sew-in interlinings
- Part 2 Nonwoven fusible interlinings
- Part 3 Woven and knitted fusible interlinings

It is intended that the fabrics in this standard should be used in conjunction with the outer cloths specified in BS 1771 'Outdoor uniform cloths for fire service, local authority and hospital staffs'.

*Certification.* Attention is drawn to the certification facilities described on the inside back cover of this standard.

## 1. Scope

This Part of this British Standard specifies requirements for woven and knitted fusible interlinings for uniform clothing for large users such as Government departments, fire services, hospitals and local authorities. Technical requirements are given in table 1 and the materials are listed in table 2 according to the garments for which they are recommended.

## 2. References

The titles of the British Standards referred to in this standard are listed on the inside back cover.

## 3. Definitions

For the purposes of this Part of this British Standard the following definitions apply.

- 3.1 strike-through. Penetration of the adhesive from the interlining to the face of the outer fabric.
- 3.2 strike-back. Penetration of the adhesive to the outer surface of the interlining.

## 4. Fusing

Fusing instructions shall be supplied with the interlining and these shall be followed exactly by the maker-up. There shall be no strike-through, and strike-back shall not be such as to cause subsequent adhesion to the lining and/or pocketing.

Allow at least 24 h to elapse between fusing operations and carrying out tests.

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Table 1. Technical requirements

Property	Test method	Performed on*	Compliance requirement			
			FWK1	FWK2	FWK3	FWK4
Mass/unit area (g/m <sup>2</sup> )	BS 2471	I	70 to 120	120 to 150	150 to 200	200 to 340
Resistance to dry cleaning	BS 4961	L	No delamination of the interlining from the outer fabric and no appreciable change in handle			
Dimensional change on cold water immersion (% max.)	BS 4736	I	2	2	2	2
Minimum tensile strength in warp direction (N/5 cm strip)	BS 2576	I	100	100	100	100

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\*I = interlining L = laminate

## 5. Technical requirements

5.1 The mass per unit area of the fusible interlining most suitable for use with the outer fabric shall be agreed between the purchaser and the manufacturer and shall be within one of the ranges given in table 1. The mass per unit area so agreed shall be subject to a tolerance of  $\pm 10\%$ .

5.2 Resistance to dry cleaning of the laminate bond (i.e. outer fabric plus interlining) shall be assessed by subjecting each specimen three times to the treatment described in BS 4961, which gives two methods of test for dry cleaning (including steam finishing). The laboratory procedure is intended primarily for screening and control testing and in cases of dispute the machine procedure shall be used.

5.3 Dimensional change on cold water immersion shall be limited as shown in table 1.

5.4 To withstand normal handling tensile strength in the warp direction shall be not less than that shown in table 1.

Peel bond strengths vary according to the construction of the outer fabric and type of finish the cloth has received. It is not practicable to specify a minimum strength that will be adequate for all the fabrics listed in BS 1771. It is therefore recommended for quality control purposes that the peel bond strength shall be as agreed between the purchaser and the supplier, according to the specific fabric and fusing method involved. A method for determination of peel bond strength is given in appendix A of BS 4973 : Part 2 : 1973.

5.6 For purposes of general comparison in respect of handle not specified in this British Standard, agreement shall be reached between the purchaser and the supplier. There shall be no appreciable change in handle of the laminate after dry cleaning.

## 6. Marking

Each interlining in the finished state shall be identified with the British Standard reference number, either by stamping or by labelling the tag-end of the piece.

Table 2. Uses\*

(a) <i>Lightweight jackets of fabric up to 410 g/m<sup>2</sup> :</i>	
Foreparts	FWK1, FWK2
Cuffs	FWK1, FWK2
Stays	FWK1
(b) <i>Jackets of fabric over 410 g/m<sup>2</sup> :</i>	
Foreparts	FWK2, FWK3
Chest reinforcements	FWK2, FWK3, FWK4
Cuffs	FWK2, FWK3
Stays	FWK1, FWK2
(c) <i>Overcoats:</i>	
Foreparts	FWK2, FWK3
Chest reinforcements	FWK3, FWK4
Stays	FWK2, FWK3
Collars	FWK2, FWK3
Belts	FWK2, FWK3, FWK4
(d) <i>Raincoats:</i>	
Foreparts	FWK1, FWK2, FWK3
Chest reinforcements	FWK1, FWK2, FWK3, FWK4
Stays	FWK1, FWK2
Collars	FWK1, FWK2, FWK3
Flaps, welts, etc.	FWK1, FWK2, FWK3
Belts	FWK1, FWK2, FWK3

\*These recommendations are for guidance only and do not prohibit the use of the various interlinings for other purposes if so desired.

## BSI publications referred to in this standard

This standard makes reference to the following British standards:

- BS 1771 Outdoor uniform cloths for fire service, local authority and hospital staffs
- BS 2471 Methods of test for the mass per unit length and per unit area of woven or knitted fabrics
- BS 2576 Methods for the determination of breaking load and extension of strips of woven textile fabric
- BS 4736 Method of test for the determination of dimensional changes of fabrics by cold water immersion
- BS 4961 Method for determination of dimensional stability of textiles to dry cleaning in perchloroethylene
- BS 4973 Interlinings  
Part 2 Nonwoven fusible interlinings

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The following BSI references relate to the work on this standard  
 Committee reference LIT/7/1 Draft for comment 74/35950 DC  
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**Co-operating organizations**

The Linen Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

The Government department marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Belfast Public Textile Testing and Conditioning House
- Central Council of Irish Linen Industry
- Clothing Institute
- Department of the Environment
- Department of Health and Social Security
- Flaxspinners' and Manufacturers' Association of Great Britain
- Flaxspinners' Association Ltd. of Northern Ireland
- Irish Linen Merchants' Association
- Irish Power Loom Manufacturers' Association
- Lambeg Industrial Research Association
- Linen Sewing Thread Manufacturers' Association
- Ministry of Commerce Northern Ireland
- \*Ministry of Defence
- Society of Dyers and Colourists
- Textile Institute
- Textile Research Council

- Association of Municipal Corporations
- British Nonwoven Manufacturers' Association
- British Railways Board
- Clothing Manufacturers' Federation
- Dyers and Cleaners' Research Organization
- Institute of Purchasing and Supply
- Manchester Fire Brigade
- Textile Clothing Contractors' Association
- Individual experts

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