

Hydrolysis resistant, thermoplastic polyether polyurethane elastomer coated nylon fabric for aerospace purposes

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee ACE/54, Wide fabrics and coated fabrics for aerospace purposes, upon which the following bodies were represented:

- British Rubber Manufacturers' Association Ltd.
- Ministry of Defence
- Society of British Aerospace Companies
- Textile Finishers' Association

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Foreword

This British Standard has been prepared by Technical Committee ACE/54 and is a revision of BS F 142 : 1995 which is superseded and withdrawn. This revision corrects errors in the standard and relaxes the type testing intervals, which were found in practice to be unnecessarily stringent.

This British Standard is one of a series for textiles of a quality suitable for aerospace purposes. During its preparation the applicable basic quality requirements contained in BS F 100 were included in the text. This standard specifies coated fabrics for use in the manufacture of inflatable life saving equipment.

The fabric designations specified in this standard are based on the user firm specifications RFD 572, BASE 8925, BASE 8926, BASE 8982, IAC/S 1336 and IAC/S 1344.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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, pages 1 to 10, an inside back cover and a back cover.



1 Scope

This British Standard specifies the requirements for six nylon fabrics coated with a thermoplastic hydrolysis resistant polyether polyurethane elastomer for use in the manufacture of aerospace items, which may include items of inflatable life saving equipment. All fabrics are intended primarily for assembly by high-frequency welding techniques. In addition, all fabrics are intended to be capable of assembly by solvent based polychloroprene or polyurethane adhesives.

NOTE 1 The information to be supplied by the purchaser in the enquiry or order is listed in clause 3.

NOTE 2 The latest revision of an Aerospace Series standard is indicated by a prefix number.

In addition to the definitive requirements, this standard also requires the items detailed in clause 3 to be documented. For compliance with this standard, both the definitive requirements and the documented items have to be satisfied.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references the latest edition of the publication referred to applies.

BS 6F 100:1998, *Procedure for inspection and testing of textiles for aerospace purposes*.

BS 2F 127:1991, *Specification for nylon fabrics suitable for coating with natural or synthetic elastomers for aerospace purposes*.

BS 2782, *Methods of testing plastics*.

BS 2782-1, *Thermal properties*.

BS 2782-1:Methods 120 A, 120 B, 120 D and 120 E:1990, *Determination of Vicat softening temperature of thermoplastics*.

BS 3424, *Testing coated fabrics*.

BS 3424-4:1982, *Method 6. Method for determination of breaking strength and elongation at break*.

BS 3424-7:1982, *Method 9. Method for determination of coating adhesion and strength*.

BS 3424-8:1983, *Methods 10A, 10B and 10C. Methods for determination of low temperature performance*.

BS 3424-9:1996, *Rubber and plastics-coated fabrics. Determination of resistance to damage by flexing*.

BS 6085:1992, *Methods for determination of the resistance of textiles to microbiological deterioration*.

BS EN 25978:1993, *Rubber- or plastics-coated fabrics — Determination of blocking resistance*.

MIL Spec MIL-C-83489¹⁾, *Cloth, coated, nylon, polyurethane coated*.

3 Information and requirements to be agreed and documented

The following information to be supplied by the purchaser shall be fully documented.

For compliance with the standard both the definitive requirements specified throughout the standard and the following documented items shall be satisfied:

- a) if required dyed, the colour (see 5.1.1);
- b) pigmentation of coating (see 5.2.1);
- c) the width required (see 5.3.1);
- d) the packaging requirements (see 6.1);
- e) the fabric designation required, together with the number of this British Standard, i.e. BS 2F 142:1999 (see 7.1).

4 General requirements

4.1 In addition to the requirements given in clauses 3 to 7 of this standard, the sections of BS F 100 given in Table 1 shall apply.

4.2 Unless otherwise specified in this standard, test requirements shall be determined in accordance with BS F 100. In the event of a dispute, the methods of test, performance standards, inspection and acceptance limits specified in this standard shall take precedence over those of BS F 100.

4.3 Qualification tests (see Table 2) shall be performed on initial production of coated fabric and thereafter when any change occurs to the material, finishing treatments or to the composition of the coating compound.

4.4 A test report detailing the results of type tests (see Table 4) shall be provided by the supplier with the first delivery batch. Type tests shall be repeated at intervals not exceeding 20 000 m of fabric. In addition, when any change occurs to the material, finishing treatments or to the composition of the coating compound the type tests shall be repeated.

¹⁾ Available from BSI Customer Services, British Standards House, 389 Chiswick High Road, London W4 4AL.