

Specification for

Woven polyester narrow fabrics for aerospace purposes

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Aerospace Standards Policy Committee (ACE/-) to Technical Committee ACE/21, upon which the following bodies were represented:

- British Narrow Fabrics Association
- Ministry of Defence
- Society of British Aerospace Companies Limited
- Society of Dyers and Colourists

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Foreword

This British Standard, prepared under the direction of the Aerospace Standards Policy Committee, is one of a series for textiles of a quality suitable for aerospace purposes and constitutes a revision of BS F 129:1986, which is withdrawn. It specifies the requirements for a series of polyester narrow fabrics for use primarily in parachutes, life saving equipment and aircrew protective clothing.

It differs from the previous edition in that yarn constructions have been revised and rationalized to reflect current industrial practice, and quality requirements defined in the latest edition of BS F 100 have been identified.

Information to be supplied by the purchaser has been included in an appendix.

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.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for woven polyester (polyethylene terephthalate) narrow fabrics for aerospace purposes.

NOTE 1 The titles of the publications referred to in this standard are listed on the inside back cover.

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

NOTE 3 The information to be supplied by the purchaser in the contract or order is listed in Appendix A.

2 General requirements

In addition to the requirements specified in clauses 3 to 7, the following sections and clauses of the latest edition of BS F 100 shall apply (see Table 1).

3 Yarn

3.1 Type

The fabric shall be manufactured from bright, continuous filament, polyester (polyethylene terephthalate) yarn.

3.2 Construction

3.2.1 The yarn shall have the nominal construction given in Table 2.

3.2.2 The tolerances on twist shall be $\pm 20\%$.

3.2.3 The direction of twist in all fabric designations shall be either all S or all Z. There shall not be different twist directions in the fabric.

4 Manufacture

4.1 The fabric shall be woven either:

- a) on a shuttle loom; or
- b) on a shuttleless loom where this is in accordance with the appropriate yarn designation as given in Table 2 (see also 4.2).

NOTE The type of weaving required should be specified in the purchaser's contract or order (see Appendix A), but for supply against this British Standard the two types of weaving are considered to be technically equivalent and either may be supplied.

4.2 Shuttleless construction shall not be used unless the appropriate yarn designation as given in Table 2 is required and, if such a yarn is required, the shuttleless construction shall be one of the following:

- a) with spool type interlocking in the body of the fabric (see Figure 1 for guidance); or
- b) with the weft knitted with one locking thread (see Figure 2 for guidance); or
- c) with the weft secured by two knitted locking threads (see Figure 3 for guidance).

4.3 The knitted edge of shuttleless constructions complying with 4.2 b) and c) shall be uniform and even. The edge shall be pulled closely into the body of the fabric to avoid beading.

4.4 Fabric designation 267 shall have a black identifying yarn positioned centrally down the fabric and this shall be included in the total warp ends.

Table 1 — General requirements (given in BS F 100)

Section	Title	Requirements and tests
1	General	All requirements
2	Quality requirements	Requirements for manufacture of narrow fabrics Requirements for dimensions and tolerances Requirements for dyed textiles except those related to fabric intended for coating Requirements for freedom from corrosive impurities (see section 4) Requirements for freedom from defects of woven narrow fabrics
3	Physical tests	Test for determination of number of threads per unit length in fabrics Test for the determination of the mass of fabrics Test for breaking strength and extension under load Test for dimensional stability on heating: boiling water
4	Chemical tests	If required by section 2: Test for conductivity of aqueous extract Test for pH value of aqueous extract Test for water soluble chloride Test for water soluble sulfate