

# Braided nylon cord with specified dimensional stability 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/22, Cords, ropes and sewing threads for aerospace purposes, upon which the following bodies were represented:

- Linen Sewing Thread Manufacturers Association
- Ministry of Defence — UK Defence Standardization
- Society of British Aerospace Companies Ltd.

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## Foreword

This British Standard, prepared under the direction of Technical Committee ACE/22, Cords, ropes and sewing threads for aerospace purposes, is one of a series for textiles of a quality suitable for aerospace purposes.

This British Standard supersedes BS F 132:1987 which is withdrawn. This new edition incorporates technical changes but it does not reflect a full review or revision of the standard, which will be undertaken in due course.

This standard specifies requirements for braided nylon cord with specified dimensional stability manufactured from twist set yarn, as previously defined in Ministry of Defence DTD Specification 5620, which this standard replaces. It differs from DTD Specification 5620 primarily in that prestabilized yarns are now permitted.

Braided nylon cord with unspecified dimensional stability, manufactured from non-twist set yarn and/or twist set yarn, as previously defined in Ministry of Defence DTD Specification 5620, is specified in BS F 135.

This new edition incorporates all earlier amendments, updates references to other standards, revises the reference to BS F 100 and improves nomenclature in line with other standards.

The quality assurance authority referred to in this standard is as stated in the contract or order, or the accredited representative of the authority stated, as instructed by the prime contractor.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its 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 8, an inside back cover and a back cover.

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## 1 Scope

This British Standard specifies requirements for braided nylon cord with specified dimensional stability, manufactured from twist set yarn 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.

## 2 General requirements

In addition to the requirements specified in clauses 3, 4, 5 and 6 of this standard, the requirements and tests of the latest edition of BS F 100 as specified in Table 1 shall apply.

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

| Section of BS F 100 | Section title        | Requirements and tests                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                   | General              | All requirements.                                                                                                                                                                                                                                                                                                                                                                                |
| 2 <sup>a</sup>      | Quality requirements | Requirements for manufacture of cordage only.<br>Requirements for dyed textiles except those related to fabric intended for coating.<br>Requirements for dimensions and tolerances of length of cordage except those relating to laid ropes.<br>Requirements for freedom from corrosive impurities (see Section 4 of BS F 100).<br>Requirements for freedom from faults of braided cordage only. |
| 3                   | Physical tests       | Tests for the determination of the mass of cordage.<br>Tests for breaking strength of cordage.<br>Tests for sheath slackness and core looping of braided cordage.<br>Tests for plaits per unit length in braided cordage.                                                                                                                                                                        |
| 4                   | Chemical tests       | If required by Section 2:<br>— test for conductivity of aqueous extract;<br>— test for pH value of aqueous extract;<br>— test for water-soluble chloride;<br>— test for water-soluble sulfate.                                                                                                                                                                                                   |

<sup>a</sup> It is not intended that Section 2 tests should be performed on each batch. The frequency of these tests should be agreed between the quality assurance authority and the cordage manufacturer.

## 3 Yarn

**3.1** The cord shall be manufactured from continuous filament bright nylon 6.6 yarns, which shall have the tenacity and extension at break as given in Table 2.

**Table 2 — Yarn properties**

|                                    |          |          |          |
|------------------------------------|----------|----------|----------|
| <b>Nominal dtex</b>                | 78       | 235      | 940      |
| <b>Nominal number of filaments</b> | 34       | 34       | 140      |
| <b>Tenacity (cN/tex)</b>           | 68 to 75 | 68 to 77 | 71 to 82 |
| <b>Extension at break (%)</b>      | 13 to 18 | 13 to 20 | 13 to 22 |

**3.2** The yarn shall conform to the properties given in Table 2 to the satisfaction of the quality assurance authority when assessment is based on the manufacturer's quality control procedures.

NOTE In case of dispute, the tenacity and extension at break shall be determined by the method of test and sampling given in BS EN ISO 2062:1995 and BS EN ISO 2060:1995, option 1.

**3.3** The yarn shall not be sized.