

[4 F. 32. June, 1943.]

(Cancelling B.S. Specification 3 F. 32.)

NOTE.—The Institution desires to call attention to the fact that this Specification is intended to include the technical provisions necessary for the supply of the material herein referred to, but does not purport to comprise all the necessary provisions of a contract.

British Standards Institution.

Incorporated by Royal Charter.

FORMED IN 1901 AS THE ENGINEERING STANDARDS COMMITTEE.

INCORPORATED IN 1918 AS THE BRITISH ENGINEERING STANDARDS ASSOCIATION.

British Standard Specification for Aircraft Material.

HEMP CORDAGE

1. **Description.** (a) The cordage shall be made from clean and well conditioned hemp, and shall be properly laid by the necessary turn being put into the strand to compensate for loss of turn in laying.

(b) Cordage of sizes 2 oz. to 1 lb. inclusive shall be made of line yarn (carded hemp or tow shall not be used).

Cordage of sizes 1½ lb. and 2 lb. shall be made of line, carded hemp or tow yarn at the option of the manufacturer.

(c) The cordage shall be 3 strand.

(d) The cordage shall be polished but no size shall be used.

Cordage of sizes up to and including 1 lb. shall be polished in the cord. Cordage 1½ and 2 lb. shall be polished in the strand or cord.

2. **Construction and Properties.** (a) The details of construction and the properties of each cord when determined by the methods described in Appendices A, B and C shall comply with the requirements specified in the following Table:—

Size.	2 oz.	4 oz.	6 oz.	8 oz.	12 oz.	1 lb.	1½ lb.	2 lb.
Minimum number of yarns per strand	2	3	3	3	3	3	4	5
Turns per foot in cord ...	70±5	57±5	40±4	38±4	29±3	24±2	20±2	17±2
Maximum weight per 60 yards in oz.	2.5	4.5	6.5	8	12	16	24	32
Minimum breaking strength in lb. ...	45	85	130	155	225	275	350	450

(b) The supplies shall be in accordance with the relevant standard patterns* in respect of hardness of strand and angle of lay but not as regards quality of hemp and number of yarns per strand.

*To be obtained from the British Standards Institution, 28 Victoria Street, London, S.W.1.

APPENDIX A.

Method for the determination of weight.

The test specimen shall be subjected for one minute to the appropriate loads (*see below*) and the weight of a ten foot length of the stretched cord determined:—

Size.	Load.
	lb.
2 oz.	$\frac{1}{2}$
4 oz.	$1\frac{1}{2}$
6 oz.	1
8 oz.	1
12 oz.	2
1 lb.	3
$1\frac{1}{2}$ lb.	5
2 lb.	6

The test shall be carried out under ordinary atmospheric conditions but in cases of dispute the specimens shall be conditioned for not less than 48 hours in an atmosphere with a relative humidity of 65 per cent and a temperature of 70° F. (21.1° C.) and then tested under the same conditions.

APPENDIX B.

Method for the determination of turns per foot in cords.

Five specimens shall be taken from the selected test sample. Each specimen shall be held at both ends in an approved machine and a load equal to 2 per cent of the specified breaking load shall be applied. The average number of turns per foot shall then be determined.

The test shall be carried out under ordinary atmospheric conditions but in cases of dispute the specimens shall be conditioned for not less than 48 hours in an atmosphere with a relative humidity of 65 per cent and a temperature of 70° F. (21.1° C.) and then tested under the same conditions.

APPENDIX C.

Method for the determination of breaking strength.

Each test specimen shall be soaked in water at ordinary room temperature for not less than 3 hours, and whilst still water soaked, shall be fixed in an approved testing machine so that the length between the supports is not less than 24 inches. The load shall be gradually and continuously increased at such a rate that the specified breaking load is reached in approximately one minute after the commencement of the application of the load.

This Specification having been approved by the Aircraft Industry Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council of the Institution as a British Standard on 15th June, 1943.

NOTE.

In order to keep abreast of progress in the Industries concerned, the British Standard Specifications are subjected to periodical review.

Suggestions for improvements, addressed to the British Standards Institution, 28 Victoria Street, London, S.W. 1, will be welcomed at all times. They will be recorded and in due course brought to the notice of the Committees charged with the revision of the Specifications to which they refer.