

D.T.D. 556B

Superseding D.T.D.556A

March, 1960

NOTE.—This specification is one of a series issued by the Ministry of Aviation either to meet a limited requirement not covered by any existing British Standard or to serve as a basis for inspection of material the properties and uses of which are not sufficiently developed to warrant submission to the British Standards Institution for standardisation.

1. Material

Continuous filament nylon 66 medium tenacity yarn shall be used in the manufacture of the fabric.

2. Manufacture

(a) The yarns shall be of nominally 45 denier.

(b) *Warp.*—The twists per inch in the warp shall be 7 ± 2 .

Weft.—The twists per inch in the weft shall be either $\frac{3}{4}$ or 5 ± 2 at the option of the Manufacturer.

(c) The ends and picks per inch in the finished fabric shall be at the discretion of the manufacturer. It is, however, desirable that the ends and picks per inch should be as nearly as possible the same in number and that they should not vary in any one piece by more than ± 2 .

(d) The weave shall be plain.

(e) The selvages shall be straight, evenly and well-made and shall have the same tension as the remainder of the fabric. The fabric shall be uniformly woven and as free as possible from defects to the satisfaction of the Inspector.

3. Finish

(a) The fabric shall be scoured, or scoured and dyed as specified in the order.

(b) The fabric shall not be pressed or calendered.

(c) The fabric shall be as free as possible from finishing defects to the satisfaction of the Inspector.

4. Width

The width of the finished fabric at any part shall be not less than $36\frac{1}{2}$ inches and not greater than 37 inches.

5. Weight

The weight of the finished fabric shall not exceed 1.6 ozs. per square yard.

6. Freedom from impurities

The finished fabric shall contain no sizing or weighting material of any description and the amount of matter extractable by water shall not exceed 0.5 per cent. by weight.

7. Breaking strength

The breaking strength of any specimen shall be not less than 40 lbs. per inch width of warp or weft.

8. Air Porosity

(a) The finished fabric shall have an average porosity of $12\frac{1}{2} \pm 1\frac{1}{2}$ cubic feet of air per square foot per second. It is, however, very desirable that the average porosity of the fabric shall be as near as possible to the mean figure of $12\frac{1}{2}$ and that the variation between the individual readings should be as low as possible.

(b) Should the average porosity of the fabric be $10\frac{1}{2}$ or $14\frac{1}{2}$ cubic feet of air per square foot per second then two further series of readings of 10 tests each shall be taken on the same piece, and the average of each series shall be not less than $10\frac{1}{2}$ nor greater than $14\frac{1}{2}$.

Any individual reading included in the average of $10\frac{1}{2}$ shall be not less than $9\frac{1}{2}$ or greater than $11\frac{1}{2}$ and any individual reading included in the average of $14\frac{1}{2}$ shall be not less than 13 or greater than 16.

The proportion of such fabric shall not exceed 5 per cent. of any delivery.

(c) Results of test recorded on control sheets shall provide adequate evidence that the production is stable and that the average level and variability meet the requirements of this specification.

9. Test samples

The selection of test samples, the procedure for conditioning and the methods of test for weight, water extractable matter, breaking strength and air porosity shall be in accordance with British Standard F.100.

Approved for issue,

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Director of Materials Research and Development (Air).

D.T.O. 5515

MINISTRY OF AVIATION

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