

Method for the

Designation of yarns

Co-operating organizations

The Textile Divisional Council, under whose supervision this British Standard was prepared, consists of representatives from the following Government department and scientific and industrial organizations:

- British Railways Board
- Consumer Council
- Cotton Industry Standards Committee
- Jute Industry Standards Committee
- Linen Industry Standards Committee
- London Transport Board
- Man-made Fibres Industry Standards Committee
- Ministry of Defence*
- Ropes and Cordage Industry Standards Committee
- Silk Industry Standards Committee
- Society of Dyers and Colourists*
- Textile Institute*
- Textile Machinery Industry Standards Committee
- Trades Union Congress
- Wool Industry Standards Committee

The Government department and organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- British Launderers Research Association
- British Man-made Fibres Federation
- Committee of Directors of Textile Research Associations
- Cotton Silk and Man-made Fibres Research Association
- Hosiery and Allied Trades Research Association
- International Federation of Cotton and Allied Textile Industries
- Scottish Textile Research Association
- Wool Industries Research Association

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Foreword

This standard makes reference to the following British Standard:

BS 947, *Specification for a universal system for designating linear density of textiles (Tex System)*.

This British Standard is in accordance with the ISO Recommendation R 1139, “*Designation of yarns*”, which has received substantial support and in the preparation of which the United Kingdom has played an active part.

The first and second editions of BS 946, issued in 1941 and 1952, provided for designations beginning with a description of the single yarn components and ending with particulars of the final product. The limitations of this order of presentation are many and BS 946 was not widely supported by the textile industry. Consequently the responsible Textile Institute Committee prepared a new draft method whereby designations of all yarns began with a description of the final product of the yarn manufacturing process, thus stressing those characteristics of a yarn that are of most importance to the majority of users and facilitating the abbreviation of yarn designations. This method was circulated for comment in 1960 but was not developed further because simultaneously alternative proposals for the designation of yarn structure were under consideration by the Technical Committee on Textiles of the International Organization for Standardization. It was agreed to await developments within ISO and to adopt the recommendations agreed internationally. This decision is implemented by publication of the present standard.

The general introduction of the Tex system for expressing the linear density of yarns is an additional incentive for standardization of the designation of yarn structure. In designating yarns it has been customary, and it remains desirable, to reflect in a condensed form details of the components of a yarn including values of the linear densities, directions and amounts of twist, number of folds, etc., of these components and/or characteristics of the yarn resulting from this construction, such as its linear density indicated as *resultant linear density*.

The resultant linear density of folded and/or cabled yarns will generally differ from the sum of the linear densities of the components and, even when starting from the same component yarns, using the same direction and amount of twist, number of folds, etc., yarns with different resultant linear densities may be produced due to differences in conditions during manufacturing, such as yarn tensions, types of machine used, moisture content of the yarns, atmospheric conditions, etc.

A yarn designation serves two purposes:

- 1) It is used as a general indication of a yarn; in this case the values for linear densities, amounts of twist, folds, etc., used in the yarn designation will be referred to as *nominal* values;
- and
- 2) it may be used for reporting the result of an analysis of a yarn; in this case the values derived from an authorized testing procedure for linear densities, amounts of twist used in the yarn designation will be referred to as *actual* values.

Attention is drawn to the fact that the application of the designation of yarns in the Tex System does not affect existing commercial practices in the trade. Values of linear density and amount of twist used in commercial transactions are *nominal* unless explicitly stated as being actual. Nominal linear densities and amounts of twist are subject to tolerances, the numerical values of which are usually agreed in the various branches of the textile industry or directly between the seller and the buyer.

In this British Standard two methods for the designation of yarns are described, namely:

- 1) Yarn designation starting from the linear density of the single yarn. It may be referred to as *single to fold designation*.
- 2) Yarn designation starting from the linear density of the resultant yarn. It may be referred to as *fold to single designation*.

The symbols used in both systems are identical. The differences are in the order of presentation, the use of the multiplication sign ($\times$) in the single to fold designation, and of the solidus (/) in the fold to single designation.

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Summary of pages

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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.