



ISO 1139

Textiles — Designation of yarns

Textiles — Désignation des fils

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This document was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 23, *Fibres and yarn*.

This second edition cancels and replaces the first edition (ISO 1139:1973), which has been technically revised.

The main changes are as follows:

- the content structure has been updated to comply with the ISO/IEC Directives, Part 2;
- [Clauses 2](#) and [3](#) have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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The general introduction of the Tex system for expressing the linear density of yarns requires standardization of the notation for yarn construction. 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 - in some cases with strong twisted filament yarns - generally differs from the sum of the linear densities of the components. 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 can be produced due to differences in conditions during manufacturing of yarns, such as yarn tensions, types of machine used, moisture content of the yarns, atmospheric conditions, etc.

A yarn notation serves two purposes:

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

Attention is drawn to the fact that the application of the notation 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 seller and buyer.

In this document, two methods for the notation of yarns are specified, namely:

- a) yarn notation starting from the linear density of the single yarn: it may be referred to as single-to-fold notation;
- b) yarn notation starting from the linear density of the resultant yarn: it may be referred to as fold-to-single notation.

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 notation, and of the solidus (/) in the fold-to-single notation.

Distinction between these two methods does not apply to single spun yarns, monofilaments and multifilaments without twist, nor to multiple wound yarns. The notation of these yarns is given under the heading of the first method (see [4.2](#) and [4.3](#)).

It is hoped that, ultimately, one method can be used to the exclusion of the other. In fact, ISO 858, dealing with yarns for fishing nets, employs only the single-to-fold method, although giving, in the abbreviations, only those items of information that are appropriate.