
INTERNATIONAL STANDARD



2646

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Wool — Measurement of the length of fibres processed on the worsted system, using a fibre diagram machine

Laine — Mesurage de la longueur des fibres travaillées sur système «laine peignée», par un appareil donnant un graphique de distribution de longueur des fibres

First edition — 1974-07-01

Sample Document

get full document from standards.iteh.ai

UDC 677.3-49 : 678.674-49 : 531.716 : 621.3.082.722,55

Ref. No. ISO 2646-1974 (E)

Descriptors : fibres, animal fibres, wool fibres, dimensional measurement, length.

Price based on 5 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2646 was drawn up by Technical Committee ISO/TC 38, *Textiles*, and circulated to the Member Bodies in April 1972.

It has been approved by the Member Bodies of the following countries :

Belgium	Iran	South Africa, Rep. of
Brazil	Ireland	Spain
Canada	Israel	Sweden
Chile	Italy	Switzerland
Czechoslovakia	Japan	Thailand
Egypt, Arab Rep. of	New Zealand	Turkey
Finland	Pakistan	United Kingdom
Germany	Poland	U.S.S.R.
Hungary	Portugal	
India	Romania	

The Member Body of the following country expressed disapproval of the document :

France

This International Standard is based on the IWTO Test Method 16-67, drawn up by the International Wool Textile Organization (IWTO).

Wool — Measurement of the length of fibres processed on the worsted system, using a fibre diagram machine

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the measurement of the length of wool fibres using a fibre diagram machine. The method is applicable to combed slivers processed on the worsted system. For slivers containing two or more fibres of different dielectric constants (for example wool and polyester) and length distributions, the results may not be an accurate reflection of the actual fibre-length distribution of the top.

2 REFERENCE

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*.

3 PRINCIPLE

A length of sliver under test is folded in two and squared off. A band of fibre ends is sealed to a plastic strip and withdrawn. The draw is then fed through the electrodes of a capacitance bridge in the apparatus and the position of a spot of light marked on recording paper, thus giving an estimate of the cumulative length distribution (*hauteur*).

4 APPARATUS

4.1 Sealing unit

The unit comprises the following main parts and accessories :

- a) trough with sliver clamp;
- b) hand-grip for squaring sliver;
- c) sealing film;
- d) roll of plastic strip;
- e) punch for making a hole 23,8 mm from aligned ends of fibres;
- f) thermostatically controlled heating element 3 mm wide on welding arm.

4.2 Fibre diagram machine

The main parts and accessories are as follows :

- a) transparent recording table of overall width 22,9 cm between edges;
- b) input platform with velvet strip for tensioning fibre draw;
- c) R.F. bridge electrode system working into tuned amplifier giving linear output;
- d) optical system giving deflection or recording image proportional to mass of fibre between electrodes;
- e) tension clip of mass between 1,5 and 3 g;
- f) small brush (see figure 1);
- g) recording paper graduated in millimetres horizontally and vertically from 0,20 cm.

A suitable machine is described in the annex.

5 ATMOSPHERE FOR CONDITIONING AND TESTING

The fibres shall be conditioned and the test shall be conducted in one of the standard atmospheres defined in ISO 139.

6 TEST SPECIMENS

6.1 Number of specimens

Unless otherwise stated, prepare and test four specimens from one sample of sliver.

6.2 Squaring the sliver

Take a length of sliver about 150 cm in length with pulled ends. Remove the presser and sliver clamp from the trough, insert the doubled thickness of sliver in the sliver clamp near the fold and screw up. Replace the sliver clamp in the slots and dispose the two layers of sliver in the trough so that the pulled ends project about 1 cm over the front edge of the slide. Smooth down the sliver with the fingers and insert the presser at the front of the trough.