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# INTERNATIONAL STANDARD



# 1958

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## Carpets — Determination of mass of total pile yarn per unit area

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## 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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, International Standard ISO 1958 replaces ISO Recommendation R 1958-1971 drawn up by Technical Committee ISO/TC 38, *Textiles*.

### ISO 1958:1973

The Member Bodies of the following countries approved the Recommendation: <https://standards.iteh.ai/catalog/standards/sist/af-7ad0-4c30-8426-d0a5c12e4de9/iso-1958-1973>

Australia	Iran	Spain
Belgium	Israel	Sweden
Brazil	Japan	Switzerland
Chile	Korea, Rep. of	Thailand
Denmark	Netherlands	Turkey
Egypt, Arab Rep. of	New Zealand	United Kingdom
France	Norway	U.S.S.R.
Germany	Poland	
India	South Africa, Rep. of	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

U.S.A.

# Carpets — Determination of mass of total pile yarn per unit area

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the mass of total pile yarn per unit area and is applicable to all pile carpets with an untreated back.

## 2 REFERENCES

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

ISO 1957, *Machine-made textile floor coverings — Sampling and cutting specimens for physical tests*.

## 3 PRINCIPLE

A known area of the carpet is weighed and dissected completely. The pile yarn is separated from the other components and each is weighed separately.

## 4 APPARATUS

- 4.1 **Balance**, accurate to 1 mg.
- 4.2 **Dissecting needles and forceps**.
- 4.3 **Rule**, graduated in millimetres.
- 4.4 **Scissors or sharp pointed knife**.

## 5 ATMOSPHERE FOR CONDITIONING AND TESTING

The specimens shall be conditioned and the test conducted in one of the standard atmospheres for conditioning and testing of textiles specified in ISO 139.

## 6 TEST SPECIMENS

6.1 Cut out, using scissors or a sharp pointed knife, three squares each approximately 150 mm X 150 mm, selecting them according to the standard procedure described in ISO 1957. Trim them so that each side of each specimen is formed by a complete row of pile or line of stitches.

6.2 Condition the specimens to constant mass in the standard atmosphere for testing (see section 5). Alternatively, condition the specimens in this atmosphere for a period of 72 h.

6.3 Measure the length and width at four places on the back of each specimen, to the nearest millimetre.

## 7 PROCEDURE

7.1 Determine the mass of the conditioned specimens to the nearest 0,01 g.

7.2 With needle and forceps, carefully remove all the yarn forming tufts and collect it together.

NOTE — In analyzing multi-frame Wilton carpets, treat buried pile yarn from dead frames as pile yarn, irrespective of whether or not it forms tufts in the specimen under examination.

7.3 Condition the yarn forming tufts and buried pile (if present) together and the remainder of the dissected specimen separately, in the standard atmosphere for testing (see section 5) for an additional period of 24 h.

For each specimen determine the mass, to the nearest 0,01 g, of the conditioned yarn forming tufts and of the buried pile (if present) and, separately, of the remainder of the dissected specimen.

NOTE — In some multi-frame Wilton carpets, the buried pile yarn may be of a different composition from the working pile. If this is so in the specimen under test, determine the mass of the buried pile separately from that of the working pile.

## 8 CALCULATION AND EXPRESSION OF RESULTS

- 8.1 Calculate the average mass in grams of
  - a) the complete specimen;
  - b) the dissected specimen.

Discard any results in which

$$\frac{\text{total mass} - \left( \begin{array}{c} \text{mass of} \\ \text{pile yarn} \end{array} + \begin{array}{c} \text{mass of} \\ \text{remainder of specimen} \end{array} \right)}{\text{total mass}}$$

is greater than 1 %.

**8.2** Calculate the average area *A* of the specimens, in square millimetres.

**8.3** The mass of the total pile yarn, in grams per square metre, is equal to

$$\frac{10^6 \times m}{A}$$

where *m* is the average mass of pile yarn, in grams.

## 9 TEST REPORT

The test report shall include the following particulars :

- a) that the test was conducted in accordance with this International Standard, and details of any operations not included or optional;
- b) the number of specimens and the dimensions and areas of each specimen tested, as well as the following masses, to the nearest 0,01 g, for each specimen :
  - 1) total specimen;
  - 2) dissected pile yarn;
  - 3) remainder of the dissected specimen;
- c) if, in multi-frame Wilton carpets, the buried pile is of a different composition from the working pile, state this fact and report the buried pile mass separately from that of the working pile;
- d) the total mass of pile yarn, in grams per square metre.

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