

INTERNATIONAL STANDARD

ISO
4195-1

First edition
1987-08-01



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

Conveyor belts — Heat resistance —

Part 1: Test method

Courroies transporteuses — Résistance à la chaleur —

Partie 1: Méthode d'essai

STANDARDSISO.COM : Click to view the full PDF of ISO 4195-1:1987

Reference number
ISO 4195-1:1987 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4195-1 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

STANDARDSISO.COM : Click to view the full PDF of ISO 4195-1:1987

Conveyor belts — Heat resistance —

Part 1: Test method

1 Scope and field of application

This part of ISO 4195 specifies a test method for determining the relative level of heat resistance of conveyor belts.

Because of the procedure requirements set, the tests can be carried out only if the cover thickness is equal to or greater than 4 mm.

2 References

ISO 37, *Rubber, vulcanized — Determination of tensile stress-strain properties.*

ISO 48, *Vulcanized rubbers — Determination of hardness (hardness of between 30 and 85 IRHD).*

ISO 188, *Rubber, vulcanized — Accelerated ageing or heat-resistance tests.*

ISO 471, *Rubber — Standard temperatures, humidities and times for the conditioning and testing of test pieces.*

ISO 4661-1, *Rubber, vulcanized — Determination of temperature rise and resistance to fatigue in flexometer testing — Part 1: Basic principles.*

3 Principle

Measurement of basic technological properties before and after exposure to heat under suitable defined conditions and consideration of the variation in these properties after exposure.

The temperatures selected for the tests are not generally the same as the temperature of the product which is to be transported; they generally have to be lower, to take account of

- a) the possibility of the belt cooling;
- b) the fact that contact does not produce temperature equality between the product and the belt.

4 Classification

Belts may be classified according to the three classes defined below; however, these classes do not correspond to the temperature of the product transported as mentioned above, and, depending on the use for which the belt is intended, the manufacturer should specify the belt class to be used.

- Class 1: Resistant to test temperatures of up to 100 °C.
- Class 2: Resistant to test temperatures of up to 125 °C.
- Class 3: Resistant to test temperatures of up to 150 °C.

5 Basic technological properties

The properties used in this evaluation are as follows.

- 5.1 IRHD hardness of the covers, in accordance with ISO 48.
- 5.2 Tensile strength and elongation at break of the covers in accordance with ISO 37.

6 Procedure

6.1 Exposure to heat

Cut a sample of belt of full thickness measuring 400 mm × 400 mm from the centre of the belt at a distance of at least 100 mm from the edges. Place it in an air oven complying with the requirements of ISO 188, for 7 days at the temperature selected in accordance with the classification defined in clause 4 (100 °C, 125 °C or 150 °C).

After exposure to heat, remove the belt sample from the air oven and leave it to cool.