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# INTERNATIONAL STANDARD



# 505

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

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## Conveyor belts — Tear propagation resistance of the carcass — Method of test

*Courroies transporteuses — Résistance à la propagation d'une déchirure dans la carcasse — Méthode d'essai*

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**Descriptors :** belts, conveyor belts, tests, mechanical tests, tear tests, crack propagation.

Price based on 2 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.

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, Technical Committee ISO/TC 41 has reviewed ISO Recommendation R 505 and found it technically suitable for transformation. International Standard ISO 505 therefore replaces ISO Recommendation R 505-1966 to which it is technically identical.

ISO Recommendation R 505 was approved by the Member Bodies of the following countries :

Australia	Greece	South Africa, Rep. of
Austria	India	Spain
Belgium	Israel	Sweden
Chile	Italy	Switzerland
Czechoslovakia	Japan	Turkey
Denmark	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.A.
Finland	New Zealand	U.S.S.R.
France	Pakistan	Yugoslavia
Germany	Portugal	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 505 into an International Standard.

# Conveyor belts — Tear propagation resistance of the carcass — Method of test

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of test for the measurement of the propagation resistance of an initial tear in the carcass of conveyor belts.

This test is intended for application to belts used in mines and in installations where there is a risk of longitudinal tearing.

## 2 PRINCIPLE

The test consists in measuring, by means of tensile testing at a given speed, the force necessary to propagate an initial tear made in a test piece from which the covers have been removed.

## 3 APPARATUS

The apparatus consists of a **dynamometric tensile testing machine** with the following essential characteristics:

- a) the machine shall be chosen so that the forces to be measured come within the upper 90 % range of its full rated capacity;
- b) the speed of separation of the jaws shall be capable of being adjusted to  $50 \pm 10$  mm ( $2 \pm 0.4$  in) per minute;
- c) the free distance between the jaws shall be capable of being adjusted to at least 300 mm (12 in).

The machine shall be provided with a **device for the graphical recording** of the force necessary to continue tearing the test piece.

## 4 TEST PIECES

### 4.1 Shape and dimensions

- Shape : rectangular.
- Length : 300 mm (12 in).
- Width :  $100 \pm 1$  mm ( $4 \pm 0.04$  in).
- Thickness : belt thickness, without covers.

### 4.2 Number

Two test pieces shall be used : one in sense A and one in sense B. (See figure 4.)

### 4.3 Method of sampling

Test pieces shall be taken from the sample in the longitudinal direction of the belt and at a minimum distance of 10 mm (0.4 in) from edges of the belt.

### 4.4 Preparation

The covers of the test pieces shall be removed by stripping or by buffing.

If there is a breaker ply, strip the corresponding covers without cutting the breaker ply over a width of 20 mm (0.8 in) only, i.e. 10 mm (0.4 in) on each side of the longitudinal axis of the test piece with the exception of the zone held in the jaws of the machine (see figure 1).

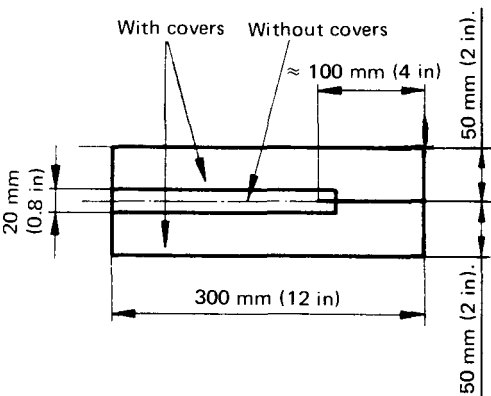


FIGURE 1 — Test piece with breaker

Cut the test pieces from the middle of one of their ends over a length of about 100 mm (4 in) parallel to the length (see figure 2).

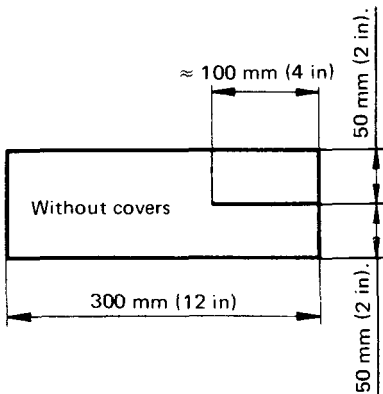


FIGURE 2 — Test piece without breaker