



SLOVENSKI STANDARD
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Naprave za kontinuirni transport - Trakovi tračnih transporterjev s toplotno odporno gumijasto prevleko - Toplotna odpornost prevleke - Zahteve in preskusne metode

Conveyor belts with heat-resistant rubber covers - Heat resistance of covers - Requirements and test methods

Courroies transporteuses avec revêtements caoutchouc résistant à la chaleur - Résistance à la chaleur des revêtements - Exigences et méthodes d'essai

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INTERNATIONAL STANDARD

ISO 4195

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Conveyor belts with heat-resistant rubber covers — Heat resistance of covers — Requirements and test methods

Courroies transporteuses avec revêtements caoutchouc résistant à la chaleur — Résistance à la chaleur des revêtements — Exigences et méthodes d'essai



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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4195 was prepared by Technical Committee ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This first edition of ISO 4195 cancels and replaces ISO 4195-1:1987 and ISO 4195-2:1988, of which it constitutes a technical revision.

Conveyor belts with heat-resistant rubber covers — Heat resistance of covers — Requirements and test methods

1 Scope

This International Standard specifies requirements and test methods for the relative level of heat resistance of conveyor belt covers made of rubber. It gives the permissible variations of hardness, elongation at break and tensile strength after exposure to heat. It is applicable only to those conveyor belts having a cover thickness greater than or equal to 4 mm. It is not suitable or valid for light conveyor belts as described in ISO 21183-1^[1].

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 18573, *Conveyor belts — Test atmospheres and conditioning periods*

ISO 23529, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

3 Performance requirements

When tested in accordance with the method specified in Clause 4, the permissible variations in hardness, elongation at break and tensile strength shall be in accordance with Table 1.

Table 1 — Permissible variations

Cover characteristic	Variation for belt class		
	1	2	3
Hardness (IRHD)			
— variation of initial value	+ 20	+ 20	+ 20
— maximum value	85	85	85
Elongation at break (%)			
— variation of initial value	– 50	– 50	– 55
— minimum value	200	200	180
Tensile strength (N/mm²)			
— variation in percentage of initial value	– 25	– 30	– 40
— minimum value	12	10	5

4 Test method

4.1 Principle

The following properties are measured, before and after exposure to heat according to 4.3.1:

- hardness of covers in accordance with ISO 48;
- elongation at break of covers in accordance with ISO 37;
- tensile strength of covers in accordance with ISO 37.

NOTE The temperatures selected for the tests are usually not those corresponding to the temperature of the product to be transported; they are generally lower to take account of

- a) the possibility of the conveyor belt cooling, and
- b) the fact that contact between the product and the conveyor belt will not equalize the temperature.

4.2 Classification

Conveyor belts shall be classified as follows:

- **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.

These classes do not correspond to the temperature of the transported product as mentioned in the Note to 4.1. Depending on the use for which the belt is intended, the manufacturer should state the class to be used for assessing compliance with this International Standard.