IS 1891 (Part 2) : 1993

भारतीय मानक

संयोजक और उत्थापक के लिये वस्त्रादि पट्टे बनाना — विशिष्टि

भाग 2 ऊष्मा प्रतिरोधी पट्टे बनाना

(तीसरा पुनरीक्षण)

Indian Standard

CONVEYOR AND ELEVATOR TEXTILE BELTING — SPECIFICATION

PART 2 HEAT RESISTANT BELTING

(Third Revision)

UDC 621·867·2·052 : 620·193·5

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

September 1993

Price Group 1

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Pulleys and Belts Sectional Committee had been approved by the Light Mechanical Engineering Division Council.

This standard was originally published in 1972 and subsequently revised in 1978 and 1988.

The present revision of the standard has been taken up to bring it in line with prevailing manufacturing practices. In this revised standard the ageing time has been reduced from 168 h to 72 h and the requirement for change in tensile strength and elongation from the original unaged values have also been modified.

This standard has been published in various parts. Other parts are:

Part 1 General purpose belting (*fourth revision*)

Part 3 Oil resistant belting (*second revision*)

Part 4 Hygienic belting (*first revision*)

Part 5 Fire resistant belting (*under preparation*)

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounding off value should be the same as that of the specified value in this standard.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Indian Standard

CONVEYOR AND ELEVATOR TEXTILE BELTING — SPECIFICATION

PART 2 HEAT RESISTANT BELTING

(Third Revision)

1 SCOPE

This standard (Part 2) covers the requirements of conveyor and elevator textile belting for use on flat or troughed idlers for conveying hot materials which are classified as follows:

	Resistance to Temperature °C (Max)	
	Lump/ Predominance of Lump	Fines (Powdered Materials)/ Predominance of Fines
Grade T-1	125	100
Grade T-2	150	125

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
1891 (Part 1) : 1993	Conveyor and elevator textile belting — Specification : Part 1 General purpose belting (*fourth revision*)
3400 (Part 4) : 1987	Methods of test for vulcanized rubbers : Part 4 Accelerated ageing (*second revision*)

3 TERMINOLOGY, DIMENSIONS, TOLERANCES, FABRIC, CONSTRUCTION AND FULL THICKNESS BREAKING STRENGTH

As prescribed in IS 1891 (Part 1) : 1993.

4 TEST REQUIREMENTS OF FINISHED BELTING

4.1 Tensile Strength and Elongation

Tensile strength and elongation at break of rubber cover when tested as described in Annex B of IS 1891 (Part 1) : 1993 shall be as specified in Table 1.

Table 1 Tensile Strength and Elongation

(*Clause* 4.1)

	Grade 1	Grade 2
Tensile strength (MPa), *Min*	12·5	12·5
Elongation at break (%), *Min*	350	350

4.2 Adhesion

The adhesion between the cover and the plies and between the individual plies shall be such that when tested in the manner described in Annex G of IS 1891 (Part 1) : 1993, the force required to cause the separation shall be as given in Table 2.

Table 2 Force of Adhesion Testing

(*Clause* 4.2)

Sl No.	Test	Force, *Min* kN/m Width	
		For Cotton or Cotton Polyamide	For Synthetic Plies
i)	Adhesion between individual plies	3·00	4·50
ii)	Adhesion between cover and carcass		
a)	Cover up to and including 1·00 mm thick	No Test	No Test
b)	Covers over 1·00 mm and up to and including 1·50 mm thick	2·20	3·00
c)	Covers over 1·50 mm thick	2·50	3·50

NOTE — No individual value obtained at the time of measurement shall be below the value specified by more than 0·80 kN/m width.

4.3 Heat Resistance

4.3.1 *Rubber Cover*

After exposure to a temperature of 100 ± 2°C for 72 h in the case of Grade T-1 and 125 ± 2 °C for 72 h in the case of Grade T - 2, the test being carried out as described in IS 3400 (Part 4) : 1987, the tensile strength and elongation at break of the rubbers covers shall not vary from the original unaged values by more than the amounts specified below:

	Grade T-1	*Grade T-2*
Tensile strength (%)	— 25	— 35
Elongation at break (%)	— 40	— 50

4.3.2 *Adhesion*

After exposure of the belt pieces prepared

according to G-1 of IS 1891 (Part 1) : 1993 to a temperature of 70 ± 1°C for 72 h in case of Grade T-1 and 100 ± 2°C for 72 h in case of Grade T-2, the test being carried out as described in IS 3400 (Part 4) : 1987, the values for adhesion between covers and the carcass and between the adjacent plies shall not vary from the original unaged values by more than − 50 %.

5 OTHER REQUIREMENTS

Any other requirements not specially mentioned in this standard shall be as prescribed in IS 1891 (Part 1) : 1993.

6 STANDARD MARK

Details available with the Bureau of Indian Standards.