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# 1333—1988

# CONVEYOR BELTING OF ELASTOMERIC AND STEEL CORD CONSTRUCTION





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This Australian Standard was prepared by Committee RU/2, Conveyor and Elevator Belting. It was approved on behalf of the Council of the Standards Association of Australia on 20 January 1988 and published on 17 June 1988.

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The following interests are represented on Committee RU/2:

Australasian Institute of Mining and Metallurgy

Australian Coal Association

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

CSIRO, Division of Applied Physics

Department of Industrial Relations and Employment, N.S.W.

Grain Handling Authority of New South Wales

Institution of Engineers, Australia

Plastics and Rubber Institute

State Electricity Commission of Victoria

Additional interests participating in preparation of Standard:

Manufacturers of conveyor belting and its components

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AUSTRALIAN STANDARD

# CONVEYOR BELTING OF ELASTOMERIC AND STEEL CORD CONSTRUCTION

## AS 1333—1988

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# PREFACE

This Standard was prepared by the Association's Committee on Conveyor and Elevator Belting under the direction of Committee RU/-, Standards for the Rubber Industry to supersede AS 1333—1980.

This Standard has been prepared to meet the current needs of industry for standardized dimensions, strengths, and quality requirements where high strength conveyor belting of the type specified is required.

Principal changes from the 1980 edition include a new grade of elastomeric cover (Grade Z) for covers with agreed special properties, and the incorporation of a propane burner gallery flame test for fire resistance.

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STANDARDS ASSOCIATION OF AUSTRALIA

# Australian Standard

# CONVEYOR BELTING OF ELASTOMERIC AND STEEL CORD CONSTRUCTION

**1 SCOPE.** This Standard specifies requirements for conveyor belting of elastomeric materials and steel cord construction in which the carcass is composed of a plane of steel cords with or without supplementary reinforcements.

NOTE: Purchasing guidelines are given in Appendix H.

WARNING: Belting complying with this Standard may not necessarily be electrically insulating at any stage of its life and must not therefore be used as an insulator for electrical work.

**2 REFERENCED DOCUMENTS.** The following documents are referred to in this Standard.

AS

1334 Methods of testing conveyor and elevator belting
- Method 1: Determination of length of endless belting (AS 1334.1)
- Method 4: Determination of troughability of conveyor belting (AS 1334.4)
- Method 5: Determination of tensile strength and elongation of covers of conveyor belting (AS 1334.5)
- Method 6: Determination of resistance of covers to ageing (AS 1334.6)
- Method 9: Determination of electrical resistance of conveyor belting (AS 1334.9)
- Method 10: Determination of ignitability and flame propagation characteristics of conveyor belting (AS 1334.10)
- Method 11: Determination of ignitability and combustion propagation characteristics of conveyor belting resulting from friction (AS 1334.11)
- Method 12: Determination of combustion propagation characteristics of conveyor belting (AS 1334.12)

1656 Steel wire ropes (other than for mining purposes)

1683 Methods of test for rubber
- Method 21: Rubber—Vulcanized—Determination of abrasion resistance using a rotating cylindrical device (AS 1683.21)

2103 Dial gauges and dial test indicators (metric series)

**3 DESIGNATION AND CLASSIFICATION.**

**3.1 Belting.** Belting shall be designated by the calculated minimum strength of the belting in kilonewtons per metre width, and shall be prefixed by the letters 'SR' in accordance with Table 1.

*Example:* Belting designated SR 1600 will have a calculated minimum strength of at least 1600 kN/m width of belt.

**3.2 Covers.** In addition to the designation given in Clause 3.1, the grade of the elastomeric cover shall be classified according to the following:

A—Abrasion resistant.

F—Fire resistant.

E—Static electricity conducting.

M, N—General purpose.

S—Static electricity conducting and fire resistant.

Z—Other grades (see Note 1).

NOTES:

1. Grade Z includes covers with specific properties as agreed between purchaser and supplier.
2. More than one elastomeric classification may be used by agreement between purchaser and supplier.

**3.3 Splicing materials.** Splicing materials for the various grades of covers shall be identified using coloured interleaves as follows:

| *Grade* | *Colour* |
|---|---|
| A, E, M, N | Blue |
| F, S | White |
| Z | Other than blue or white |

**4 CONSTRUCTION.**

**4.1 Belting.**

**4.1.1** *General.* The belting shall consist of a single plane of longitudinal steel cords laid parallel to the belting surface surrounded and moulded into an elastomeric matrix. Right-hand and left-hand lay cords shall be placed alternately in the belting.

NOTE: Suggested constructions are shown in Table 1.

**4.1.2** *Steel cords.* The cords shall consist of steel wire ropes of suitable breaking load (see Table 1) and shall be constructed to withstand the effects of flexing during the life of the belting. The diameter of the cords shall be within the following tolerances:

(a) 7 × 7 cords (as illustrated in Appendix A):

| | |
|---|---|
| Less than 3.35 mm ..... | +6, −1 percent |
| 3.35 mm to 3.75 mm ..... | +5, −1 percent |
| Greater than 3.75 mm ..... | +4, −1 percent |

(b) 7 × 19 cords:

| | |
|---|---|
| Less than 6.30 mm ..... | +5, −1 percent |
| 6.30 mm and greater ..... | +4, −1 percent |

The method of determining cord diameter is given in Appendix A.

The wires in the cords shall be suitably corrosion resistant, and coated, if necessary, to provide the required adhesion.