

Conveyor and elevator belting —

**Part 1: Specification for rubber and
plastics conveyor belting of textile
construction for general use**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Rubber Standards Policy Committee (RUM/-) to Technical Committee RUM/16, upon which the following bodies were represented:

- British Coal Corporation
- British Rubber Manufacturers' Association
- British Steel plc
- Chief and Assistant Chief Fire Officers' Association
- Electricity Supply Industry in England and Wales
- Engineering Equipment and Materials Users' Association
- Health and Safety Executive
- Loughborough University of Technology
- Malaysian Rubber Producers' Research Association
- Man-made Fibres Producers' Committee
- Mechanical Handling Engineers' Association
- Plastics and Rubber Institute

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Foreword

This revision of this Part of BS 490 has been prepared under the direction of the Rubber Standards Policy Committee. It supersedes BS 490-1:1985, which is withdrawn.

The principal changes from the 1985 edition are detailed below.

- a) Positive tolerances on length of open-ended belts is increased to + 2.5 % from + 2 %, in accordance with ISO 251:1987.
- b) The tolerance on widths below 650 mm has been amended from ± 6.5 mm to ± 5 mm for widths below 500 mm and ± 1 % on widths over 600 mm instead of 650 mm specified in the 1985 edition. These changes, plus the addition of belt widths up to 3 200 mm, are in accordance with ISO 251:1987.
- c) The lower limitation on cover thickness of 0.8 mm is removed in favour of the more practical design recommendations of Appendix B and removes the accepted anomaly of the difficulties associated with verifying the level of cover thickness.
- d) The minimum elongation at break is amended from 12 % to 10 % and the recommendation that the maximum elongation at the reference force be 4 %, is made a mandatory requirement. Both these changes are in accordance with the draft revision of ISO 283.
- e) The minimum full thickness tensile strengths are amended to accord with the values specified in the draft for public comment 89/35428 DC for the revision of ISO 283. The transverse tensile strengths for type 500 and 63 belts are amended slightly to 200 kN/m and 250 kN/m respectively.
- f) Additional values for troughing angles of 40° and 50° have been determined and included, in order to remove doubts associated with these common intermediate angles.

The use of natural and/or synthetic rubbers and the use of natural and/or man-made fibres are permitted in accordance with this standard.

Service conditions and recommended conditions for use of belting complying with this standard are given in BS 2890.

In the preparation of this standard, consideration has been given to the work of Technical Committee ISO/TC 41, Pulleys and belts (including vee-belts), of the International Organization for Standardization (ISO) and the following standards for conveyor belts have been followed as far as possible.

ISO 251, *Conveyor belts — Widths and lengths*.

ISO 252, *Conveyor belts — Minimum requirements for ply adhesion and method of test*.

ISO 282, *Conveyor belts — Sampling*.

ISO 283, *Full thickness tensile strength and elongation of conveyor belts — Specifications and method of test*.

ISO 432, *Ply type conveyor belts — Characteristics of construction*.

ISO 433, *Conveyor belts — Branding*.

ISO 583, *Conveyor belts — Tolerances on total thickness and thickness of covers*.

ISO 703, *Conveyor belts — Troughability — Characteristics and method of test*.

For terms used in connection with conveyor and elevator belting, reference should be made to the following.

BS 3558, *Glossary of rubber terms*.

BS 3618, *Glossary of mining terms*.

BS 3810, *Glossary of terms used in material handling — Part 2 Terms used in connection with conveyors and elevators (excluding pneumatic and hydraulic handling)*.

Items that are not requirements of this standard, but that should be agreed between the manufacturer and the purchaser, are given in Appendix A.

WARNING. Belting made in accordance with this British Standard will not necessarily be electrically insulating at any stage of its life, and should not therefore be used as an insulator for any electrical work. In assessing the flammability characteristics of conveyor belting and its suitability for specific applications, it is recommended that reference be made to Draft for Development DD 180, "Guide for the assessment of toxic hazards in fire in buildings and transport."

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.