

Conveyor and elevator belting —

Part 11: Methods of test for safety —

Section 11.3 Drum friction tests

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Plastics and Rubber Standards Policy Committee (PRM/-) to Technical Committee PRM/67, 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 Association
- 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

This British Standard, having been prepared under the direction of the Plastics and Rubber Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1991

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The following BSI references relate to the work on this standard:
Committee reference PRM/67
Draft for comment 89/45719 DC

ISBN 0 580 19237 7

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This Section of BS 490 has been prepared under the direction of the Plastics and Rubber Standards Policy Committee and is part of a series of standards detailing methods of test for conveyor and elevator belting. It is recommended that this Section should be read in conjunction with BS 490-1 or BS 490-2 and BS 490-3 published separately.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, 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.

1 Scope

This Section of BS 490 describes a method of test to determine the propensity of a conveyor belt to generate heat, flame or glow when held stationary under a given tension, against a rotating steel drum.

Means of varying the belt tension for different modes of operation are included.

Two modes of operation are described: mode A, in which the test is pursued, at increasing tensions, until the belt ruptures and mode B, in which the test is conducted at a specified and fixed belt tension for a given time or until rupture.

Mode B is unsuitable for testing belting for use underground.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Principle

A sample of conveyor belt, suitably mounted and tensioned, is wrapped half way around a rotating steel drum, simulating a stalled belt. The test is continued at specified tensions until the belt breaks or for a given time period. Any flame or glow of the belt and the maximum temperature of the driving drum are reported.

3 Apparatus

NOTE A general arrangement of the drum friction testing apparatus is shown in Figure 1.

3.1 Steel drum, of external diameter 210 ± 1 mm mounted on a horizontal axle and capable of being rotated under all load conditions at 200 ± 5 rpm.

