STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1334.10—1994

Methods of testing conveyor and elevator belting

Method 10: Determination of ignitability and flame propagation characteristics of conveyor belting

RECONFIRMATION NOTICE

Technical Committee RU-002 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 08 December 2018.

The following are represented on Technical Committee RU-002:
Australasian Institute of Mining and Metallurgy
Australasian Plastics and Rubber Institute
Australian Chamber of Commerce and Industry
Australian Industry Group
Bureau of Steel Manufacturers of Australia
Engineers Australia
NSW Department of Planning and Environment
SafeWork NSW
University of Newcastle

NOTES

AS 1334.10—1994
Reconfirmed 2019

Australian Standard®

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PREFACE

This Standard was prepared by the Standards Australia Committee on Conveyor and Elevator Belting under the direction of the Multitechnics Standards Policy Board to supersede AS 1334.10—1982.

The Standard eliminates the discrepancy between the temperature and flame size specified in the previous edition.

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METHOD

1 SCOPE This Standard sets out a method for determining the ignitability and flame propagation characteristics of a horizontally oriented specimen of conveyor belting.

2 PRINCIPLE The end of a horizontally oriented specimen of belting is subjected to a flame from a specified gas burner for a given period and the duration of flame after removal of the burner is measured. After the disappearance of flame, a current of air is passed over the specimen and the duration of the afterglow is measured.

3 APPLICATION TO FIRE HAZARD ASSESSMENT

3.1 General On their own, these test results do not indicate the fire hazard of the material or product under actual fire conditions and consequently should not be applied to the assessment of fire hazard without taking into account additional supportive information.

3.2 Application of test results This test may be used to determine the ignitability and flame propagation characteristics of conveyor belting materials. However, it must be stressed that this test will not indicate the fire hazard of a material in actual use. It is the manner in which the material is used and modified during fabrication which determines the fire hazard of the final product. This test may be used to specify the ignitability and flame propagation in a raw material or in a product standard for conveyor belting.

4 REAGENT Propane gas (at least 95 percent purity)* supply for burner is required.

5 APPARATUS The following apparatus is required:

A test gallery of approximately 500 mm × 500 mm × 500 mm (see Figure 1) having a glass inspection window on one side and containing the following items of equipment:

(a) A support stand, ring clamp, wire gauze 125 mm square of 0.56 mm dia. wire and 0.71 mm openings.

(b) A Bunsen burner having an 11 mm ID burner tube or equivalent and capable of being adjusted, using propane gas fuel to produce a flame temperature of 1000 ±50°C.

(c) An electric fan or nozzle capable of producing an air velocity of 1.5 ±0.15 m/s.

(d) A suitable timing device to measure the duration of flame and afterglow.

(e) A mirror mounted inside the test gallery to permit the specimen to be observed from the back through the inspection glass.

6 TEST PIECES

6.1 Acceptance testing Four test pieces shall be prepared 150 mm long by 13 mm wide by the full thickness of the belting. Two test pieces shall be cut parallel to the longitudinal direction of the belting and two parallel to the transverse direction of the belting.

6.2 Type approval For type approval, ten test pieces shall be prepared 150 mm long by 13 mm wide by the full thickness of the belting. Five test pieces shall be cut parallel to the longitudinal direction of the belting and five parallel to the transverse direction of the belting.

7 PROCEDURE The test shall be carried out in the absence of outside wind currents. The test procedure shall be as follows:

(a) Thoroughly clean the inspection glass and mirror before each test.

(b) Arrange a test piece, pulley side down, in the clamp with its longitudinal axis in a horizontal position and its transverse axis inclined at an angle of 45 degrees. Arrange the test piece so that it will be 25 mm above the top of the burner when the burner is placed under it. Clamp the wire gauze horizontally 6 mm below the test piece so that 12 mm of the test piece is extended beyond the end of the gauze.

(c) Mount the Bunsen burner in the guide. Light the burner and adjust to give a flame temperature of 1000 ±50°C at the position of the test piece.

NOTE: The temperature can be ascertained by inserting a J-type, K-type or N-type Mineral Insulated Metal (MIM) thermocouple of nominal 2 mm diameter with an appropriate read-out, into the flame in the position normally occupied by the test piece, i.e. 25 mm above the burner and reaching to the farther edge of the flame.

* Available as chemically pure Propane.