

AS/NZS 3744.1:1998

ISO 8191-1:1987
Reconfirmed 2013

Australian/New Zealand Standard®

**Furniture—Assessment of the
ignitability of upholstered furniture**

**Part 1: Ignition source—
Smouldering cigarette**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS/86, Burning Behaviour of Textile Products, Floor Coverings and Furniture. It was approved on behalf of the Council of Standards Australia on 31 October 1997 and on behalf of the Council of Standards New Zealand on 27 October 1997. It was published on 5 February 1998.

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Australasian Furnishing Research and Development Institute
Australian Competition and Consumer Commission
Australian Retailers Association
Australian Wool Processors Council
Australian Wool Research and Promotion Organisation
Australian Wool Testing Authority
Consumers Federation of Australia
Council of Textile and Fashion Industries of Australia
CSIRO—Division of Building, Construction and Engineering
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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

AS/NZS 3744.1:1998

**Furniture—Assessment of the ignitability of upholstered furniture
Part 1: Ignition source—Smouldering cigarette**

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Technical Committee CS-086 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.

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Australian Compliance Institute
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CSIRO Manufacturing & Materials Technology
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Ministry of Consumer Affairs (New Zealand)
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RMIT University
Royal New Zealand Plunket Society

NOTES

Australian/New Zealand Standard[®]

Furniture—Assessment of the ignitability of upholstered furniture

Part 1: Ignition source— Smouldering cigarette

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS/86, Burning Behaviour of Textile Products, Floor Coverings and Furniture. It is equivalent to, and has been reproduced from ISO 8191-1:1987, *Furniture—Assessment of the ignitability of upholstered furniture*, Part 1: *Ignition source: smouldering cigarette*. In Australia, the Standard supersedes AS 3744.1—1989, of the same title. In New Zealand, the Standard supersedes (in part) NZS 8709:1984, *Fire tests for furniture*, Part 1: *Methods of test for the ignitability by smokers' materials of upholstered composites for seating*.

For the purposes of this Standard, the ISO text is amended, supplemented or replaced as set out in Appendix ZZ. These changes are indicated by a marginal bar set adjacent to the relevant clause, note, table, figure or part thereof affected.

As this Standard is reproduced from an international Standard, the following applies:

- (a) Its number appears on the cover and title page, while the international Standard number appears only on the cover.
- (b) In the source text, 'this part of ISO 8191' should read 'this part of AS/NZS 3744'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to international Standards should be replaced by Australian Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian Standard</i>
ISO	AS
139	1327
Textiles—Standard atmospheres for conditioning and testing	Standard environments for conditioning and testing plastics materials
	or
	2001
	2001.1
	Methods of test for textiles
	Part 1: Conditioning procedures

Appendix ZA sets out the requirements for referring to this Standard in other Standards and in commercial literature.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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AUSTRALIAN/NEW ZEALAND STANDARD

Furniture—Assessment of the ignitability of upholstered furniture

Part 1:

Ignition source—Smouldering cigarette

0 Introduction

This part of ISO 8191 is one of a series of standards concerned with the ignitability of upholstered furniture using different ignition sources. The ignition source used in this part is a smouldering cigarette.

It is the intention to publish further parts utilizing a series of flaming ignition sources of increasing severity. Part 2 will use a gas flame representing a match equivalent flame as the first step in the series and it is anticipated that further parts will extend the range by using larger gas flames and either wooden cribs or filled paper bags.

1 Scope and field of application

This part of ISO 8191 lays down a method of test to assess the ignitability of material combinations, such as covers and fillings used in upholstered seating when subjected to a smouldering cigarette as an ignition source.

The tests measure only the ignitability of a combination of materials used in upholstered seating and not the ignitability of a particular finished item of furniture incorporating these materials. They give an indication of, but cannot guarantee, the ignition behaviour of the finished item of furniture.

2 Reference

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*.

3 Definitions

For the purposes of this part of ISO 8191, the following definitions apply.

3.1 progressive smouldering: Exothermic oxidation, not accompanied by flaming, that is self-propagating, i.e. independent of the ignition source. It may or may not be accompanied by incandescence.

3.2 flaming: Undergoing combustion in the gaseous phase with the emission of light.

4 Criteria of ignition

4.1 Progressive smouldering ignition

For the purposes of this part of ISO 8191, all the following types of behaviour are considered to be progressive smouldering ignitions:

- a) any test assembly that displays escalating combustion behaviour so that it is unsafe to continue the test requires active extinction;
- b) any test assembly that smoulders until it is essentially consumed within the test duration;
- c) any test assembly that smoulders to the extremities of the specimen, viz upper or lower margins, either side or to its full thickness, within the duration of the test;
- d) any test assembly that, on final examination, shows evidence of charring other than discoloration, for more than 100 mm in any direction apart from upwards from nearest part of the original position of the source.

NOTE — In practice it has been found that there is usually a clear distinction between materials which may char under the influence of the ignition source but which do not propagate further (non-progressive combustion) and those where smouldering develops in extent and spreads (progressive combustion).

4.2 Flaming ignition

For the purposes of this part of ISO 8191, all the following types of behaviour are considered to be flaming ignitions:

- a) any test assembly that displays escalating combustion behaviour so that it is unsafe to continue the test requires active extinction;
- b) any test assembly that burns until it is essentially consumed within the test duration;
- c) any test assembly on which any flame front reaches the lower margin, either side or passes through its full thickness within the duration of the test.

5 Principle

Subjecting an assembly of upholstery materials to a smouldering cigarette ignition source. The assembly is arranged to represent in stylized form a junction