



Information Kit on Fabric Flammability Testing

1 Introduction

This document provides background information for people interested in having fabrics flammability tested for use in commercial furniture applications.

2 Requirements

The burning behaviour requirements for fabrics in the Standards AS/NZS 4438 - *Height adjustable swivel chairs* and AS/NZS 4688 - *Fixed height chairs* are as follows:

Covering materials and filling materials shall meet the burning behaviour performance as set out in AS/NZS 4088.1.

NOTE: More stringent requirements such as BS 5852 Source 5 for upholstery or filling materials or other regulatory requirements may need to be met in public space seating.

3 Combinations of foams and fabrics

In both AS/NZS 4088.1. and BS 5852 it is recommended that the fabric being assessed be tested in combination with the interliner (if applicable) and filling (foam) that will form the composite that is intended to be used in the final product assembly i.e. the finished item of furniture. However, in most cases a fabric supplier will have little or no control over the inner layers (interliners and fillings) that will be specified in combination with their fabric.

The alternative (available for fabric assessed to the requirements of AS/NZS 4088.1 only) is that testing be performed using a standard non-flame retardant foam that represents a probable worst case combination. This allows - where the composite is successfully tested - for the results to be 'generalised' i.e. it is considered likely that if the fabric performs satisfactorily with this foam it will perform satisfactorily with all other foams. This is the most common approach to fabric flammability testing and certification.

BS 5852 testing is only ever performed on a particular composite and results cannot be generalised beyond that. Compliance, therefore, can only be claimed with respect to the actual combination of foam/interliner/fabric that was tested.

4 Flammability (Ignitability) test levels

Both AS/NZS 4438 - Height adjustable swivel chairs and AS/NZS 4688 – Fixed height chairs require **as a minimum** that fabrics meet the burning behaviour performance requirements as set out in AS/NZS 4088.1. The ignition source specified in this standard is a smouldering cigarette. The test (AS/NZS 4088.1) is suitable for normal commercial/office applications.

Chair fabrics intended for use in 'public space' seating may be specified as requiring compliance to more stringent testing eg BS 5852 Source 5. The ignition source specified as 'source 5' in this standard is a 'flaming wooden crib'. Ignition sources 0 to 4 are also available for testing. Ignition source 0 is approximately equal to that used in AS/NZS 4088.1, so is rarely specified in Australia or New Zealand. Ignition sources 1 to 5 are more severe, each approximately twice the energy value of the previous. They are appropriate for environments where the risk of ignition is considered greater than normal commercial/office applications (eg public spaces). The severity of the ignition source chosen depends on the furniture's intended end use environment. It is up to the client or specifier to make this determination. Please note: specifiers and/or regulators may chose to include other, or additional, flammability requirements based, for example, on the Australian Building Code or on specific analysis of the hazards present in a particular environment.

Although Sources 1 to 5 of BS 5852 are flaming ignition sources it cannot be assumed that satisfactory performance against a flaming source will automatically give satisfactory performance against a smouldering ignition source. It is therefore necessary to submit test specimens to both smouldering and flaming ignition tests to comply with any of the BS 5852 Sources 1 to 5 i.e. both AS/NZS 4088.1 and BS 5852 Source X.

5 Costs

Furntech-AFRDI's charges for **fabric testing** are as follows:

Flammability (to AS/NZS 4088.1)	\$370
Flammability (to BS 5852 Source 5) ⁺	\$540

These prices are subject to 10% GST.

NOTE: + Sources 0 to 4 are also available at the same charge. Source 0 is approximately equivalent to AS/NZS 4088.1. Sources 1 to 5 are progressively more severe.

The Institute's laboratory is certified by NATA for the most common fabric flammability tests including those described above. Further information can be obtained from the Institute on 03 6326 6155 or from the website

www.furntech.org.au

5.1 Blue Tick certification

Furntech-AFRDI does not offer **Blue Tick certification** for fabrics.

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6 Samples

6.1 AS/NZS 4088.1

For AS/NZS 4088.1 two samples of 800 x 650 mm (at least) with the long side parallel to the selvage are required.

6.2 AS/NZS 4088.1 and BS 5852 Source X

The minimum size and number of **fabric** and **interliner (if applicable)** and **slab foam** samples:

- two samples of 800 x 650 mm (at least) fabric with the long side parallel to the selvage; and
- 750 x 450 x 75 slab foam, two off; plus interliner (if applicable) 1500 x 1500 (or full roll width x 1500), two off; plus fabric 1500 x 1500 (or full roll width x 1500), two off.

7 Timing

Assuming there are no problems and that staff and equipment are available, fabric testing usually takes around five working days (including conditioning). When the sample, the Testing Request form and payment are all received, the item will be placed on the testing schedule.

8 Payment

Furntech-AFRDI policy is that **PAYMENT MUST BE MADE BEFORE TESTING COMMENCES**. Please phone 03 6326 6155 to request an invoice if this will help to facilitate payment. Facilities are available for payment by Visa and MasterCard.

9 Freight

PLEASE MARK THE MODEL NAME/NUMBER ON EACH SAMPLE BEFORE DISPATCH.

For BS 5852 fabrics and interliners (if applicable) please indicate whether they have been chemically treated to reduce ignitability or if they are considered to be made of inherently flame retardant materials (eg fabric woven from flame retardant yarns, PVC). Foams should also be supplied including details of any combustion modification treatment.

For AS/NZS 4088.1 fabrics and interliners (if applicable) please include laundering instructions as per the care label supplied with the fabric.

The outside of all packaging should be marked:

Furntech-AFRDI Reference Number (if known)
DELIVER TO Furntech-AFRDI
SCHOOL ROAD (UNIVERSITY CAMPUS)
LAUNCESTON TASMANIA 7248

To assist with matching samples with Testing Request forms, please attach a copy of the Testing Request form to each set of samples.

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10 The next step

If you wish to proceed with testing, please follow these steps:

- copy the Testing Request form and complete it for each fabric sample, fax one copy to Furntech-AFRDI and attach a copy to the sample;
- on each sample mark
 - a) the name of the company,
 - b) the description,
 - c) the front or face side; and
 - d) material information and laundering instructions as per Section 9; and
- calculate payment required from the price list at the front of this paper and send your payment to Furntech-AFRDI (we also take Visa and MasterCard). Please phone 03 63 266 155 to request an invoice if this will help facilitate payment.

11 Queries

If you have any problems with any of this please phone Furntech-AFRDI on 03 6326 6155.

Testing Request - Fabric Flammability

Please complete for each to be tested and fax one copy to 03 6326 3090 and attach the other to the sample before dispatch.

* Name of Organisation:

* Name of Contact (a):

* Address of Organisation (b):

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* Telephone Number:

Fax Number:

Email:

Website:

ABN Number

* Manufacturers Product ID:

* Description of Product (c):

* Composition of Product:

Weight per linear meter:

* Laundering Instructions:

Tests Required (d): AS/NZS 4088.1

BS 5852 Source

* Where is product made (d):

Reasons for Test:

Cost of Testing (exc. GST): \$.....

* It is mandatory that information be entered in these fields.

Authorisations

I hereby authorise Furntech-AFRDI or its agents to carry out the tests described above at the agreed price.

Should the product(s) described above be found to comply with the relevant standard, I authorise Furntech-AFRDI to publicise the fact. *(Optional - please strike out if authority is not given)*

Signature of Authorised Officer

Date

NOTES

- (a) Please insert the name of the person Furntech-AFRDI staff should contact, if necessary, concerning the tests.
- (b) Please insert street address.
- (c) Please print the name and/or number of the product you wish to appear on the test report.
- (d) Please specify the town and country in which the product is produced.