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Australia



Security door and window screens

Part 1: Classification and performance



AS 5039.1:2023

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- Curtin University
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- Master Locksmiths Association of Australasia
- National Association of Testing Authorities Australia
- National Security Screen Association

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Preface

This Standard was prepared by the Standards Australia Committee CS-023, Security Screen Doors and Window Screens, to supersede AS 5039:2008, *Security screen doors and security window grilles*.

The objective of this document is to provide users of security screen doors or security windows with the general and performance requirements for security screen doors and windows used in all building types specified in the NCC.

This document is intended to be read in conjunction with AS 5039.2 and AS 5039.3. It is anticipated that AS 5039.2 will be published in 2024.

This document forms part of the AS 5039 series on security door and window screens. A list of all parts in this series can be found in the Standards Australia online catalogue.

The major changes in this edition are as follows:

- (a) Inclusion of requirements for corrosion testing.
- (b) Inclusion of product definitions, categorisations and testing formats.
- (c) Addition of impact testing categories.
- (d) Changes to marking requirements.

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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Introduction

Door and window insect screens are a common feature of construction in most parts of Australia, allowing for free circulation of air in hot weather and, often excluding insects from the premises; however, insect screens offer little security and are easily broken through. The development of the concept of security screen doors or windows, being strong enough to withstand most attempts at forced entry while retaining the advantages of an insect door and window screen has led to a rapid rise in the number of these security screen doors and windows being sold and installed.

In setting performance requirements for security screen doors and windows, this document acknowledges that such security screen doors and windows are not intruder-proof. They are intended primarily to provide a degree of security for residents of occupied premises, and their effectiveness should be considered in relation to their intended usage.

The use of unsuitable fastenings or the installation of a security door or window screen into a weak door or window frame can seriously undermine the ability of a security screen door or window to resist the intentions of an intruder.

Security screen doors and windows are currently sold as separate products and are not supplied as part of a door and a window suite. Hence, they are fitted to existing exterior door and window frames either as they stand or with the use of proprietary fittings, such as adaptors, frame strengthening members, tamper-resistant fasteners, security hardware and the like. Accordingly, the installer has an obligation to assess the strength and suitability of the existing door or window frame in addition to correctly installing the security screen door or window. Once installed, all these parts need to perform together as a system.

Security depends on the strength and adequacy of —

- (a) the security door and window screen;
- (b) any adaptors, frame strengthening members and the method of fixing;
- (c) locking and operating hardware; and
- (d) the structure and strength of the door and window frame.

Particular attention should be paid to the installation of security screen doors to door frames and security window screens to window frames that have not been designed to accept security door and window screens.

Consideration should also be given to occupant safety in the event of a fire or other emergency when selecting and installing security window screens.

NOTES

Australian Standard®

Security door and window screens

Part 1: Classification and performance

Section 1 Scope and general

1.1 Scope

This document specifies requirements for the performance of all types of security door and window screens including hinged, sliding, folding, removable and fixed that are used in Class 1 to Class 10 buildings. It is concerned primarily with resistance to forced entry.

NOTE 1 Building types are classified in the National Construction Code.

NOTE 2 Screens not meeting the performance requirements of this document are considered non-security screens.

1.2 Application

This document is intended for use by regulatory authorities and anyone concerned with the sale, manufacture, installation and general requirements of security door or window screens.

It is intended that this document be read in conjunction with AS 5039.2 and AS 5039.3.

1.3 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1231, *Aluminium and aluminium alloys—Anodic oxidation coatings*

AS 1874, *Aluminium and aluminium alloys—Ingots and castings*

AS 2331.3.1 *Methods of test for metallic and related coatings Corrosion and related property tests - Neutral salt spray test (NSS test)*

AS 3715, *Metal finishing—Thermoset powder coating for architectural applications of aluminium and aluminium alloys*

AS 4145.2, *Locksets and hardware for doors and windows, Part 2: Mechanical locksets for doors in buildings*

AS 4506, *Metal finishing - Thermoset powder coatings*

AS 5039.3, *Security door and window screens, Part 3: Methods of test*

AS/NZS 1594, *Hot-rolled steel flat products*

AS/NZS 1595, *Cold-rolled, unalloyed, steel sheet and strip*

AS/NZS 1734, *Aluminium and aluminium alloys—Flat sheet, coiled sheet and plate*

AS/NZS 1866, *Aluminium and aluminium alloys—Extruded rod, bar, solid and hollow shapes*

AS/NZS 3750.9, *Paints for steel structures, Part 9: Organic zinc-rich primer*

AS/NZS 4680, *Hot-dip galvanized (zinc) coatings on fabricated ferrous articles*

AS/NZS 4792, *Hot-dip galvanized (zinc) coatings on ferrous hollow sections, applied by a continuous or a specialized process*

BS 4842, *Specification for liquid organic coatings for application to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with liquid organic coatings*

AAMA 2603, *Voluntary specification, performance requirements and test procedures for pigmented organic coatings on aluminum extrusions and panels*

AAMA 2604, *Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminum extrusions and panels*

AAMA 2605, *Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels*

1.4 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

1.4.1

auxiliary bolt

additional bolt that is activated by a strike or locking mechanism when the door is locked and that automatically engages with a corresponding strike in the door frame creating an additional locking point

1.4.2

deadlatching bolt

spring-actuated bevelled latch bolt that operates in conjunction with an auxiliary bolt which automatically locks the latch bolt against return by end pressure

1.4.3

deadlocking latch bolt

latch bolt that, when the door is closed, can be locked by operation of a key or turn knob against return by end pressure

1.4.4

door frame

frame that surrounds and supports a hinged or sliding door

Note 1 to entry: The frame consists primarily of two jambs, a head and a threshold or sill.

1.4.5

framing section

structural member forming the perimeter of the security door or window screen that supports the infill panel

1.4.6

infill

material that provides a physical barrier to entry but allows the passage of light and air

1.4.7

interlock

device that secures the stile of the non-locking edge of a sliding security screen door or window

1.4.8

key

device that activates the lock mechanism or cylinder