Amendment No.1. - June, 1986

AS 2803—1985
UDC 692.817:343.71.004.4

Australian Standard®
2803—1985

HINGED SECURITY SCREEN DOORS

[Title allocated by Defence Cataloguing Authority:
DOOR, SCREEN (HINGED SECURITY, DESIGN) NSC 5670]

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

D

This Australian standard was prepared by Committee CS/23, Security Screen Doors. It was approved on behalf of the Council of the Standards Association of Australia on 4 June 1985 and published on 12 July 1985.

The following interests are represented on Committee CS/23:

Aluminium Development Council

Architectural Aluminium Fabricators Federation of Australia

Australian Consumers Association

Confederation of Australian Industry

Housing Commission of New South Wales

Insurance Council of Australia

Master Locksmiths Association of Australasia

Metal Trades Industry Association of Australia

Police Department, N.S.W.

Victoria Police

Western Australia Police Department

This standard was issued in draft form for comment as DR 84123.

AS 2803/Amdt 1/1986-06-02

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No 1
to
AS 2803—1985
HINGED SECURITY SCREEN DOORS

REVISED TEXT

SUMMARY: This amendment applies to Clauses A5, A6.6 and A6.7, and Fig. A1.

Published on 2 June 1986.

AUSTRALIAN STANDARD

HINGED SECURITY SCREEN DOORS

AS 2803—1985

First published 1985

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 3813 9

PREFACE

This standard was prepared by the Association's Committee on Security Screen Doors, in response to requests from a manufacturer of metal mesh, and from the Australian Consumers Association, both of which had expressed concern that many screen doors, which were claimed to provide security, were in fact unable to withstand modest forces.

In Western Australia, action has been taken by the Police Crime Prevention Bureau, and doors marketed as security or safety doors must meet certain strength requirements set by the Bureau. The W.A. Crime Prevention Bureau's requirements have been used as the basis of this standard and the assistance received therefrom is gratefully acknowledged.

As the overall effectiveness of a security screen door depends both on the strength of the door itself and the nature of its installation, requirements have also been prepared for the installation of security screen doors.

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
HINGED SECURITY SCREEN DOORS

FOREWORD

Screen doors are a traditional feature of housing in most parts of Australia, allowing for free circulation of air in hot weather, but excluding insects from the house. However, fly screen doors offer little security and are easily broken through. The development of the concept of security screen doors, being strong enough to withstand most attempts at forced entry while retaining the advantages of a screen door, has led to a rapid rise in the number of these doors being sold and installed. In setting performance requirements for security screen doors this standard acknowledges that such doors are not 'intruder proof' but are rather sufficiently strong to require an excessive amount of noise and time on the part of an intruder.

It should be noted that a security screen door cannot be considered as a substitute for a soundly constructed main door fitted with a good quality lock. Furthermore, security screen doors are intended primarily to provide a degree of security for residents of occupied premises, and the effectiveness of these doors must be considered with regard to their intended use.

SPECIFICATION

1 SCOPE. This standard specifies requirements for the design, construction and performance of hinged, single leaf, security screen doors.

NOTE: Requirements for the installation of security screen doors are set out in AS 2804. It should be noted that the effectiveness of security screen doors is dependent on the strength of the door, the adequacy of its installation in the door frame, and the adequacy of the door frame and surrounds themselves.

2 REFERENCED DOCUMENTS. The following documents are referred to in this standard:

AS 1247	The Evaluation of Results of Accelerated Corrosion Tests on Metallic Coatings
AS 2331	Methods of Test for Metallic and Related Coatings
2331.3.1	Part 3—Corrosion and Related Property Tests—Neutral Salt Spray (NSS) Test
AS 2804	Installation of Hinged Security Screen Doors
SAA MP 45	Report on Strength Grouping of Timbers

3 DEFINITIONS. For the purpose of this standard, the following definitions apply:

3.1 Door frame—a frame, previously assembled, surrounding and supporting a door, not necessarily the thickness of the wall. It consists primarily of two jambs and a head.

3.2 Door framing—the structural frame of a door leaf.

3.3 Dead bolt—a lock bolt having no spring action, usually rectangular in section and activated by a key or knob, and which becomes locked against end pressure when projected.

3.4 Dead locking latch bolt—a bevelled end, latch-type bolt which can be automatically or manually locked against end pressure when projected.

3.5 Security screen door—a door intended to be resistant to forced entry and which incorporates a large area of grille or mesh material to allow the passage of light and air. Doors of this type are also referred to as safety doors or security doors.

NOTE: In Western Australia it is a requirement that the words security screen door shall only be applied to a model of door which has been tested and passed the test criteria as approved by the licensing officer of the Security Agents Act.

3.5.1 *Type I security screen door*—a security screen door which has openings small enough to generally prevent an arm from being passed through.

3.5.2 *Type II security screen door*—a security screen door which has openings of a size which may allow an arm to be passed through but will not allow bodily entry.

NOTE: Both Type I and Type II doors are considered to be suitable for the purpose of a security screen door. Type II doors are generally of steel construction whereas Type I doors may be either aluminium or steel.

4 DESIGN AND CONSTRUCTION.

4.1 Galvanic compatibility. Where different metals are in metal to metal contact, they shall be galvanically compatible.

4.2 Corrosion protection. Any corrosion protection coating used shall be such that when representative samples of the structural components so treated are subjected to a neutral salt spray test of 240 h duration in accordance with AS 2331.3.1, they will achieve a rating number of not less than 7 when evaluated by the method described in AS 1247.

4.3 Door framing. The door framing shall be manufactured from materials which comply with appropriate Australian standards and which alone or in combination will pass the performance tests set out in Clause 5 of this standard.

Steel components shall be protected against corrosion in accordance with Clause 4.2.

4.4 Corner joints. Each corner joint of the door shall be rigid and designed to preclude loosening of the joint with usage and the passage of time.

Corner joints in aluminium frames shall be reinforced by the use of corner stakes. Corner stakes shall be fitted to the frame members with an adequate means of mechanical joining or an interference fit. The heads of any rivets or screws shall not be on the outside face of the frame.

Corner joints in steel frames shall be welded or shall be reinforced with corner stakes as set out above.

4.5 Grille.

4.5.1 *General.* The grille of a security screen door shall comply with the following requirements:

(a) The product of the number of intersections of strands by a circle of 150 mm diameter placed anywhere on the grille, and the shear strength of a strand, determined in accordance with Appendix A, Paragraph A6.8, shall be not less than 24 kN (see also Table 1).

For the purpose of assessing compliance with this clause, and Clause 4.5.2(a) below, decorative branches of a grille, the cutting of which does not aid in the removal of the 150 mm circular area, shall not be counted. Additionally, where the circle intersects a knuckle, this shall be counted as two strands.

(b) The shear strength of any strand of the grille determined in accordance with Appendix A, Paragraph A6.8, shall be not less than 3 kN.

(c) The web, or connecting join between two strands of an extruded or expanded mesh grille, shall have a minimum thickness of 2 mm over a length of at least 10 mm, for aluminium grilles, or dimensions giving equivalent shear strength for grilles made of other materials. The width of the web, (i.e. the separation, if any, between the strands at the knuckle) shall be no greater than the nominal width of the thinnest strand.

4.5.2 *Type I doors.* The grille of a Type I security screen door shall, in addition to the requirements of Clause 4.5.1 above, comply with the following:

(a) A circle of 150 mm diameter placed anywhere on the grille shall make not less than three intersections with strands.

(b) The greatest dimension of any opening in the grille shall be not greater than 90 mm.