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APPROVAL AND TEST SPECIFICATION FOR SEMI-ENCLOSED FUSES FOR A.C. CIRCUITS

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

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations or departments were officially represented on the committee entrusted with the preparation of this specification:

Australian Chamber of Commerce

Australian Electrical and Electronics Manufacturers Association

Confederation of Australian Industry

Department of Housing and Construction

Electrical Apparatus Approvals Authorities

Electrical Contractors Association of Australia

Electrical Testing Laboratories

Electricity Supply Association of Australia

Electronic Importers Association

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Amendment No 1
October 1981

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No 1
to
AS 3135—1980
SAA Approval and Test Specification
for
SEMI-ENCLOSED FUSES FOR A.C. CIRCUITS

The 1980 edition of AS 3135 is amended as follows; the amendment should be inserted in the appropriate place.

SUMMARY: The following sections of the standard are covered by this amendment: Clauses 5.4 (new), 9.1; Tables 3, 5.

Published on 6 October 1981.

Page 6. Clause 5.

Title—*add* after 'Rated Voltages,' the words 'Preferred Current Ratings,'.

AMDT No 1 OCT. 1981

This amendment forms part of the specification 12 months from date of publication.

Page 7. Clause 5.

Add new Clause 5.4 as follows:

5.4 Preferred Current Ratings. The following current ratings in amperes shall be preferred: 6, 8, 10, 12, 16, 20, 25, 32, 40, 50, 63, 80, 100.

AMDT No 1 OCT 1981

This amendment forms part of the specification 12 months from the date of publication.

Pages 8 and 9. Clause 9.1.

Paragraph 3, line 1—*delete* '35 A' and *substitute* '32 A'.

Paragraph 3, line 3—*delete* the word 'maximum'.

Paragraph 3, line 4—*delete* the words 'column 2' and *substitute* 'column 1'.

Paragraph 4, line 1—*delete* '35 A' and *substitute* '32 A'.

Paragraph 4, line 4—*delete* the words 'column 2' and *substitute* 'column 1'.

Paragraph 5, line 3—*delete* the words 'column 3' and *substitute* 'columns 2 and 3'.

AMDT No 1 OCT. 1981

This amendment forms part of the specification 12 months from the date of publication.

Page 9. Table 3.

AMDT No 1 OCT. 1981

Delete existing Table 3 and *substitute:*

TABLE 3
FUSE-ELEMENT SIZES FOR TESTS

1	2	3
Current rating of fuse	**Fuse-element size** (see Note)	
	Diameter	**SWG**
A	**mm**	
6	0.250	33
8	0.315	30
10	0.355	29
12	0.400	27
16	0.500	25
20	0.560	24
25	0.630	23
32	0.800	21
40	0.950	19
50	1.250	18
63	1.400	17
80	1.600	16
100	1.800	15

NOTE: Where not otherwise specified by the manufacturer.

This amendment forms part of the specification 12 months from the date of publication.

Page 10. Table 5.

AMDT No 1 OCT. 1981

Columns 1 and 2—*delete* rated current '60' and *substitute* '63' in each case.

This amendment forms part of the specification 12 months from the date of publication.

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PREFACE

This revised specification, prepared by Committee EL/2, Electrical Approvals Standards, was approved on behalf of the Council of the Standards Association of Australia on 25 August 1980, and was published on 1 November 1980.

This specification is one of a series of approval and test specifications issued by the Association under Part 2 of the SAA Wiring Rules. These specifications are accompanied by a general specification AS C100 containing definitions and general requirements for electrical materials and equipment. The purpose of these specifications is to outline conditions which must be met to secure approval for sale and use of electrical equipment in Australia. Only safety matters and conditions closely allied thereto are covered.

This edition is technically identical with the 1973 edition except for a change to Clause 9.4, 2nd paragraph, in which the test cables are now as specified in Clause 8.12(ii) of AS C100, and some editorial updating.

This specification supersedes AS 3135—1973 from date of publication.

The Association desires to call attention to the fact that this specification does not purport to include all the necessary conditions of a contract.

This specification requires reference to Australian standard approval and test specification—

AS C100 Definitions and General Requirements for Electrical Materials and Equipment

and Australian standards—

AS 1152 Test Sieves

AS 3000 Part 1—SAA Wiring Rules

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

APPROVAL AND TEST SPECIFICATION FOR SEMI-ENCLOSED FUSES FOR A.C. CIRCUITS

This specification shall be read in conjunction with AS C100. (See also Clause 3, below.)

1 SCOPE. This specification applies to semi-enclosed electric fuses, with current ratings up to and including 100 A, intended for installation as protective devices required under Part I of the SAA Wiring Rules (AS 3000), and intended for use in 50 Hz a.c. circuits at low or medium voltage.

In general these fuses are used to protect circuits having a prospective fault current up to 4 kA. Household installations usually come within this catetory.

NOTE: Fuses complying with this specification may have a fusing factor of 2.0. At currents smaller than rated minimum fusing current the fuses do not give protection, because they do not blow, or blow only after an indeterminately long time. They may, however, deteriorate if they carry currents greater than rated current continuously.

2 DEFINITIONS. For the purpose of this specification, the following definitions apply:

2.1 Fuse—a device that, by the fusing of one or more of its specially designed and proportioned components, opens the circuit in which it is inserted and breaks the current when it exceeds a given value for a sufficient time. The fuse comprises all the parts that form the complete device. (See Fig. 1.)

2.2 Fuse-element—the part of a fuse designed to melt when the fuse operates.

2.3 Semi-enclosed fuse—a fuse in which the fuse-element is neither in free air nor totally enclosed, apart from any external containing-case not forming part of the fuse.

2.4 Fuse-carrier—the removable part of a fuse designed to carry the fuse-element.

2.5 Fuse-carrier contact—a conducting part of a fuse-carrier intended to engage with a fuse-base contact.

2.6 Fuse-base—the fixed part of a fuse provided with terminals for connection to the external circuit.

2.7 Fuse-base contact (fixed contact)—a conducting part of a fuse-base, connected to a terminal and intended to engage with a fuse-carrier contact.

2.8 Rated voltage—the voltage assigned by the manufacturer to indicate the nominal system voltage with which the fuse may normally be associated.

2.9 Rated current—the current stated by the manufacturer as the current the fuse will carry when tested in accordance with Clause 9.4.