AS 3790—1992
Reconfirmed 2017

Australian Standard®

Portable warning triangles for motor vehicles

This Australian Standard was prepared by Committee MS/49, Retroreflective Devices. It was approved on behalf of the Council of Standards Australia on 21 July 1992 and published on 12 October 1992.

The following interests are represented on Committee MS/49:

Australian Federation of Construction Contractors

Australian Road Research Board

Austroads

Confederation of Australian Industry

Metal Trades Industry Association of Australia

Railways of Australia Committee

Additional interests participating in preparation of Standard:

Department of Transport and Communications

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 3790—1992
Portable warning triangles for motor vehicles

RECONFIRMATION NOTICE

Technical Committee MS-049 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.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 29 November 2017.

The following are represented on Technical Committee MS-049:

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Department of Planning, Transport and Infrastructure (SA)
New Zealand Road Safety Manufacturers Association
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The University of New South Wales
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NOTES

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Portable warning triangles for motor vehicles

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PREFACE

This Standard was prepared by the Standards Australia Committee on Retroreflective Devices. It confirms the interim edition, AS 3790(Int)—1990, which was issued in August 1990 to supersede AS E38—1962, *Portable warning signs for motor vehicles.*

As indicated in the Preface to the Interim Standard, the retroreflective performance of devices is now specified by CIL value, and retroreflective materials and devices used in the manufacture of triangles must now conform to recently published Standards which impose more rigorous requirements than was the case when AS E38 was first published. These requirements, in addition to photometric properties, now include specification of colour and physical properties.

Two types of triangle are now specified. The first (Type A) is a development of the triangle design originally specified in AS E38—1962, with substantially increased retroreflective performance requirements. The second (Type B) has been introduced in the interests of harmonization with ECE Regulation 27/03. Its specification sets out the Australian requirements for a triangle meeting the description and performance requirements of that Regulation.

Manufacturers should note particularly that in order to produce a Type A triangle having the minimum dimensions permitted by the Standard and at the same time meeting the increased retroreflective performance requirement, it will be necessary to use either retroreflective material meeting the *Class 1A* specification in AS 1906.1, or discrete retroreflective devices capable of the same or better performance.

CONTENTS

FOREWORD

This Standard makes provision for two types of triangle—

Type A—which is based on the AS E38—1962 design but with more closely specified design and performance requirements, and

Type B—which equates in design and performance to the ECE Regulation 27/03 triangle commonly used in European countries.

The ECE triangle has been included so as to conform with government policies of harmonization with ECE Regulations as far as practicable. The ECE triangle is larger in size and has a higher photometric performance than the minimum device allowed under the Type A specification. Its inclusion will be an aid to manufacturers who desire to export triangles to countries requiring the ECE device, and an aid to importers desiring to market an imported ECE triangle in Australia. It should be noted however that the relevant ECE regulation implies a single-sided device. Because triangles used in Australia are used in such a way that when placed on a two-way carriageway they need to be visible to both directions of traffic, this Standard specifies the Type B triangle as a double-sided device.

NOTE: Manufacturers contemplating the export of triangles to countries requiring the ECE Approval Mark are advised to consult the original ECE Regulation 27/03.

The practice in Australia immediately prior to publication of this Standard was for regulatory authorities to specify the use of three triangles of a type similar to that now specified as Type A. It is noted that European practice, from whence the ECE or Type B specification is derived, is to use only one triangle. For this reason, reference to the requirement for a ‘set of three’ triangles has been omitted from the Type B triangle specification.

It is emphasized however, that the choice as to which Type is specified in State or Territory regulations or how many triangles are required to be carried is entirely a matter for the regulatory authority. Other than the statements above, neither the Committee nor Standards Australia makes any recommendation in this regard.

STANDARDS AUSTRALIA

Australian Standard

Portable warning triangles for motor vehicles

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the design and performance requirements for portable warning triangles required to be carried in certain motor vehicles in accordance with the National Road Traffic Code and various State and Territory traffic laws or regulations. They are not intended for use in conjunction with roadworks. Standard signs for this latter purpose are specified in AS 1742.3.

Two types of triangle are specified, Type A and Type B (see Clause 1.5).

1.2 APPLICATION This Standard is to be applied as follows:

(a) Type A triangles shall comply with Section 1 and Section 2.

(b) Type B triangles shall comply with Section 1 and Section 3.

Although it is recognized that the performance requirements for the two Types of triangle are not identical, for the purpose of this Standard both sets of requirements are considered to have equal validity.

1.3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1742 Manual of uniform traffic control devices
1742.3 Part 3: Traffic control devices for works on roads

1906 Retroreflective materials and devices for road traffic control purposes
1906.1 Part 1: Retroreflective materials
1906.2 Part 2: Retroreflective devices (non-pavement application)

2445 Methods of sampling and testing retroreflective materials and devices for road traffic control purposes
2445.2 Part 2: Retroreflective devices (non-pavement application)

ECE Regulation 27/03 Uniform provisions for the approval of advance-warning triangles (incl. Amdt. No. 3). Agreement concerning the adoption of uniform conditions of approval and reciprocal recognition of approval for motor vehicle equipment and parts

1.4 DEFINITIONS For the purpose of this Standard the definitions given in AS 1906.1 and the following apply.

1.4.1 Retroreflective material—a flexible sheeting, uniformly covered with retroreflective elements, e.g. minute glass spheres enclosed or encapsulated in a transparent plastics film, or minute micro-prisms moulded into a transparent plastic film, the plastic film in each case tinted to the required colour and able to be cut to shape.

1.4.2 Retroreflective device—a discrete, usually rigid, retroreflector of small physical size composed of retroreflective elements, e.g. cube-corners moulded into rigid transparent plastics, tinted to the required colour.

1.4.3 Set of triangles—three complete triangles complying with Type A requirements (see Clause 1.5).

1.5 TYPES OF DEVICE Two types of portable warning triangle are specified. They are designated as follows:

(a) *Type A*—the standard triangle whose design and performance are specified in Section 2.

(b) *Type B*—The 'ECE' triangle whose design and performance are similar to that given in ECE Regulation 27/03, and which are specified in Section 3.