

AS/NZS 1906.1:1993

Australian/New Zealand Standard

**Retroreflective materials and
devices for road traffic control
purposes**

Part 1: Retroreflective materials

AS/NZS 1906.1—1993

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee MS/49, Retroreflective Devices. It was approved on behalf of the Council of Standards Australia on 17 December 1992 and on behalf of the Council of Standards New Zealand on 29 April 1993. It was published on 17 May 1993.

The following interests are represented on Committee MS/9:

Australian Chamber of Manufactures
Australian Road Research Board
Austroads
Confederation of Australian Industry
Confederation of Construction Contractors
Metal Trades Industry Association of Australia
National Association of Testing Authorities
Railways of Australia Committee

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Part 1: Retroreflective materials

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PREFACE

This Standard was prepared by the Joint Australia/New Zealand Standards Committee MS/49 on Retroreflective Devices, to supersede AS 1906.1—1990, *Retroreflective materials and devices for road traffic control purposes*, Part 1: *Retroreflective materials*, which in turn was a major revision of AS 1906.1—1976. It is now issued as a Joint Standard under the terms of the Active Cooperation Agreement between Standards Australia and Standards New Zealand with the objective of reducing barriers to trade between the two nations.

The 1990 edition of the Standard included several major changes brought about by technical developments in the manufacture of retroreflective material, and the policy of Standards Australia to bring its Standards into line with international Standards wherever possible. In summary, these changes were—

- (a) revision of CIL/m² values for Class 1 and Class 2 retroreflective materials which reflects the increased performance of material that is now available;
- (b) introduction of a new category, Class 2A, which specifies a material of photometric performance lying between Class 1 and Class 2;
- (c) deletion of the colour known in AS 1742 as 'freeway green' (i.e. the colour specified simply as 'green' in AS 1906.1—1976) and its replacement with 'standard green' with correspondingly altered colour specification and CIL/m² requirements;
- (d) inclusion of 0.33° and 2.0° observation angles and the 30° entrance angle as a move towards harmonization with international Standards; and
- (e) inclusion of a durability designation to provide a standardized form in which suppliers can describe materials in terms of real time minimum life expectancy.

This edition of the Standard includes four more changes, the first two of which were foreshadowed in the Preface to the 1990 edition. These are—

- (f) the addition of a specification for Class 1A, a material whose specified CIL/m² performance is generally at least twice that of Class 1, and for which use of the new, technologically advanced micro-prismatic materials is envisaged;
- (g) the addition of a test for wrinkling, which can occur under some conditions of high temperature and humidity;
- (h) an appendix giving a means of estimating the degradation through life of retroreflective material subject to outdoor exposure in service; and
- (i) the re-introduction of the colour 'freeway green' deleted from the 1990 edition, but now to be known as 'green (NZ)'. The addition of this colour together with the colour orange, has been made at the request of New Zealand sign manufacturers and users.

In addition the opportunity was taken to reincorporate the test methods from AS 2445.1—1990 into AS/NZS 1906.1 as appendices. This is in line with a policy which will be applied to all parts of AS/NZS 1906 as the opportunity arises. AS 2445.1 is to be withdrawn.

The entrance and observation angles specified in Tables 2.0, 2.1, 2.2 and 2.3 of both the present Standard and the 1990 edition differ from those in the 1976 edition in that the 0.33° observation angle has been substituted for 0.5°, and the 30° entrance angle has been substituted for 40°. These altered angles are a move towards partial harmonization with international Standards. In anticipation of complete harmonization in a future edition of this Standard, values for the 2.0° observation angle have been included in light print. These latter values are for information only at this stage.

Of the interests represented on the Committee, the Australian Chamber of Manufactures did not support the publication of this Standard.

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