

Specification for

Retroreflecting number plates

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee AUE/1, Vehicle lighting and signalling, upon which the following bodies were represented:

- Association of Chief Police Officers of England and Wales
- British Glass Manufacturers' Confederation
- British Numberplate Manufacturers' Association
- British Plastics Federation
- Department of Transport
- Glass and Glazing Federation
- Motor Cycle Industry's Association of Great Britain Ltd.
- Royal Society for the Prevention of Accidents
- Society of Motor Manufacturers and Traders Limited

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 November 1995

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First published October 1987
Second edition September 1972
Third edition May 1989
Fourth edition November 1995

The following BSI references relate to the work on this standard:
Committee reference AUE/1
Draft for comment 94/705491 DC

ISBN 0 580 24751 1

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This British Standard has been prepared by Technical Committee AUE/1. It was first published in 1967 and revised as BS AU 145a:1972 to provide an alternative to existing types of number plates for use in accordance with the appropriate regulations.

BS AU 145b:1989 took account of developments in materials and methods of manufacture since publication of the 1972 edition. It enabled number plates of plastics materials, as well as those made of traditional materials by traditional methods of manufacture, to conform to the same standard and included similar in-service performance requirements and certain features that were previously dealt with in legislation. BS AU 145b was not referred to in revised legislation, as originally envisaged, because of possible requirements for European number plates. The envisaged European requirements were subsequently dropped. This revision of BS AU 145 takes account of further developments since 1989, particularly in relation to the remote camera technology introduced under the Road Traffic Act 1991 [1] and changes envisaged in revised regulations. This revision of BS AU 145 supersedes BS AU 145b:1989 which is withdrawn.

NOTE 1 This standard will only become effective when it is invoked by regulations, made by the Secretary of State for Transport which apply to vehicles registered in Great Britain and Northern Ireland.

NOTE 2 Upon publication of BS AU 145c, BSI Customer Services will respond to purchase orders for BS 145 by supplying copies of the 1995 edition. Copies of the 1972 edition may be obtained by quoting the number BS AU 145a/72.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations. In particular, attention is drawn to the Road Vehicles (Registration and Licensing) Regulations [2] giving effect to this standard which specify, or will specify, the character sets and number plate sizes and layouts that are to be used for different groups of vehicles, and approval requirements.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for retroreflecting number plates for vehicles. The standard includes requirements for colorimetric and photometric properties and tests for weather resistance, resistance to impact, bending, vibration, corrosion, solvents, water and extremes of temperature.

NOTE Retroreflecting number plates may be manufactured from any material which performs satisfactorily in service, providing the requirements of this standard are met.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to, or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1

character

a letter or number making up part of a vehicle registration mark

3.2

coefficient of luminous intensity, R

the quotient of the luminous intensity of the retroreflector in the direction of observation by the illuminance at the retroreflector on a plane perpendicular to the direction of the incident light

3.3

coefficient of retroreflection, R'

the quotient of the coefficient of luminous intensity of a plane retroreflecting surface by its area

3.4

entrance angle

the angle characterizing the angular position of the retroreflector with respect to the direction of the incident light

3.5

observation angle

the angle by which the direction of observation of the retroreflector differs from the direction of incident light

3.6

retroreflecting number plate

a plate exhibiting the registration mark of a vehicle in which only the background to the registration mark consists of retroreflecting material

3.7

retroreflection

reflection in which the reflected rays are preferentially returned in directions close to the opposite of the direction of the incident rays, this property being maintained over wide variations of the direction of the incident rays

3.8

sample unit

a pair of retroreflecting number plates within the dimensions shown in Figure 1, one with a white and one with a yellow retroreflecting background, or in the case of a motorcycle one only with a yellow retroreflecting background, as used, complete with between two and seven characters and in the format and size specified in the appropriate regulations and including a representative method of fixing where appropriate

4 Design

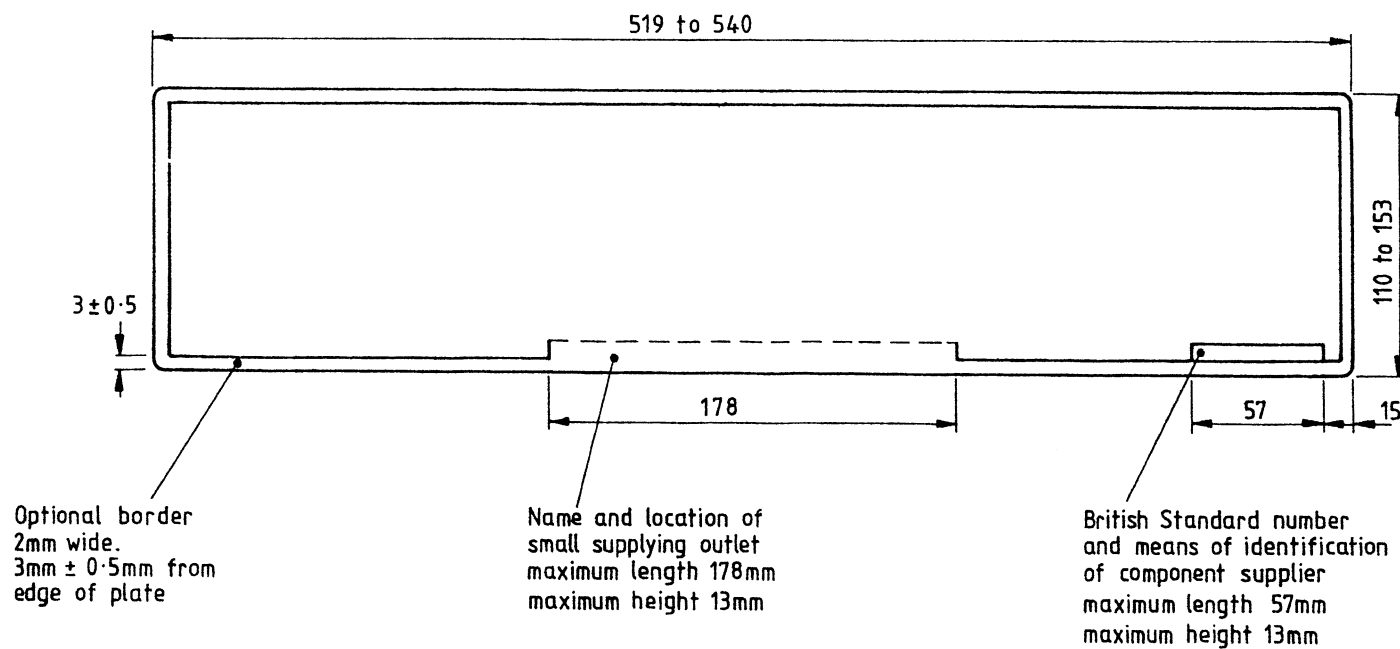
NOTE The appropriate regulations of the Road Traffic Act [1] should be referred to for size and type of letters, numbers and margins of retroreflecting number plates.

5 Marking

5.1 Each number plate shall be permanently and legibly marked with the following information:

- a) the number of this British Standard, i.e. BS AU 145c:1995¹⁾;

¹⁾ Marking BS AU 145c:1995 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity, which might also be desirable.



NOTE 1 All dimensions are in millimetres.

NOTE 2 See 3.8.

NOTE 3 The figure is not to scale.

Figure 1 — Dimensions and layout of test sample