



BSI Standards Publication

**Specification for retroreflecting
number plates**

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 28 February 2018. It was prepared by Technical Committee AUE/1, *Vehicle lighting and signalling*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS AU 145d:1998, which is withdrawn. This standard was first published in 1967 and revised as BS AU 145a:1972. Subsequent revisions produced BS AU 145b:1989 and BS AU 145c:1995.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- emphasizing the need where possible to avoid fixings in the readable area (use of adhesives);
- the introduction of photometric testing after surface abrasion and scratch resistance;
- further clarification of the colour of characters; and
- adequate contrast between background and characters in Near wavelengths has been added as a requirement to demonstrate compatibility with automatic number plate recognition (ANPR) systems.

Product certification/inspection/testing. Users of this British Standard are advised to consider the desirability of third-party certification/inspection/testing of product conformity with this British Standard. Users seeking assistance in identifying appropriate conformity assessment bodies or schemes may ask BSI to forward their enquiries to the relevant association.

Test laboratory accreditation. Users of this British Standard are advised to consider the desirability of selecting test laboratories that are accredited to BS EN ISO/IEC 17025 by a national or international accreditation body.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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1 Scope

This British Standard specifies requirements for retroreflecting number plates for vehicles, including requirements for:

- a) colorimetric and photometric properties;
- b) adequate contrast between background and characters in NIR wavelengths to demonstrate compatibility with automatic number plate recognition (ANPR) systems; and
- c) resistance to bending, impact, abrasion, corrosion, solvents, weathering and extremes of temperature.

The British Standard does not specify requirements for number plates fitting, which is prescribed by statutory regulations.

NOTE 1 The appropriate regulations of The Road Vehicles (Display of Registration Marks) Regulations 2001 (as amended) [1] specify requirements for fixing, size and type of letters, numbers and spacings of retroreflecting number plates.

NOTE 2 Retroreflecting number plates can be manufactured from any material which performs satisfactorily in service, providing the requirements of this British Standard are met.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS 245, *Specification for mineral solvents (white spirit and related hydrocarbon solvents) for paints and other purposes*

BS 2869, *Fuel oils for agricultural, domestic and industrial engines and boilers — Specification*

BS EN ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance*

BS EN ISO 4892-2:2013, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps*

BS EN ISO 11664-1, *Colorimetry — Part 1: CIE standard colorimetric observers*

BS EN ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

Other publications

[N1] CIE Publication No. 15: *Colorimetry*.

[N2] CIE Publication No. 54.2: *Retroreflection definition and measurement*.

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1 character

letter or number making up part of a vehicle registration mark