

Black materials for masking existing road markings — Specification

ICS 93.080.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee B/509, Road equipment, to Subcommittee B/509/2, Horizontal road markings and road studs, upon which the following bodies were represented:

British Coatings Federation Ltd.
 British Glass Manufacturers Confederation
 County Surveyors' Society
 Department of the Environment, Transport and the Regions
 (Central Transport Group)
 Department of the Environment, Transport and the Regions
 (Highways Agency)
 Institution of Civil Engineers
 Institution of Highways and Transportation
 Retro-reflective Equipment Manufacturers Association
 Road Safety Marking Association

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Foreword

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 3 and a back cover.

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Introduction

Black masking materials are required to cover existing permanent road markings, on a temporary basis at road works, in order to provide clear and unambiguous horizontal signalization to drivers.

Black masking materials are thermoplastic, paint, tapes or other materials.

Black masking materials may be removable or non-removable.

1 Scope

This British Standard specifies the performance requirements for black materials used for masking existing road markings on asphalt road surfaces.

Application methods are not covered by this standard. Suppliers are required to provide comprehensive application instructions including the use of equipment, primers etc.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS EN 1436:1998, Road marking materials — Road marking performance for road users.

BS EN 1824, *Road marking materials — Road trials*.

BS 3900-D5, *Methods of test for paints — Optical tests on paint films — Part D5: Measurement of specular gloss of non-metallic paint films at 20°, 60° and 85°*.

3 Terms and definitions

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

3.1

luminance factor

ratio of the luminance of a body to that of a perfect reflector or transmitting diffuser, identically illuminated

3.2

skid resistance

frictional force between tyre and road masking material available to oppose skidding

3.3

specular gloss

ratio of the luminous flux reflected from an object in the specular direction for a specified source and receptor angle to the luminous flux reflected from glass with a refractive index of 1,567 in the specular direction

4 Procedure for testing

4.1 Laboratory tests

Black masking materials shall initially undergo laboratory tests in accordance with **5.1**, **5.2** and **5.3**.

The laboratory shall prepare samples of black masking materials applied to aluminium plates of at least 3 mm thickness and free from contaminants.

4.2 Road performance trials

Black masking materials shall undergo road performance trials on a site which conforms to the test site criteria specified in BS EN 1824.

The duration of the road trials for black masking materials shall be approximately three to four months.

NOTE There may be practical benefits from arranging the road trials at the same location, and to commence at the same time as road trials for other road marking materials.

Materials shall be applied, in accordance with the supplier's instructions, to cover three existing white markings; or

- a) permanent centre lane line markings; or
- b) transverse road trial line markings which conform to the relevant performance classes of BS EN 1436 following exposure to traffic.

NOTE A 1 m section of each transverse road trial line marking is to be covered with black masking material placed centrally between the centre line and the edge line of the inside lane.

The tests of the black masking materials, following exposure to traffic, defined in 5.1, 5.2, 5.3 and 5.4, shall be made in situ.

5 Requirements

5.1 Luminance factor and colour

5.1.1 General

The luminance factor β and the chromaticity shall be measured using the measuring method specified in BS EN 1436:1997, Annex C.

5.1.2 Luminance factor β

Black masking materials shall have an initial luminance factor β of no greater than 0.06, and a retained value following exposure to traffic of no greater than 0.06.

5.1.3 Colour

Black masking materials, both when new and following exposure to traffic, shall conform to Table 1.

Table 1 — Chromaticity region for black masking materials

Coordinates	Corner points			
	1	2	3	4
x	0.385	0.300	0.260	0.345
y	0.355	0.270	0.310	0.395

5.2 Skid resistance

The skid resistance of black masking materials, expressed in SRT units, shall be measured with a skid resistance tester according to the measurement method in BS EN 1436:1997, Annex D.

Black masking materials shall have an initial skid resistance of not less than 45, and a retained value following exposure to traffic of not less than 45.

5.3 Specular gloss

The specular gloss of black masking materials shall be determined using the test methods specified in BS 3900-D5.

Measurements shall be taken at the 85° geometry only.

Black masking materials shall have an initial value for specular gloss of no greater than 4, and a retained value following exposure to traffic of no greater than 4.

NOTE The values given for specular gloss may be revised when more experience of using this test method with black masking materials has been gained.

5.4 Removability

NOTE Requirements for removability apply only to preformed materials defined as removable.

Preformed black masking materials shall be capable of being removed from the road surface, either intact or in large pieces, in such a way that no damage, deformation or cracking occurs to the surface of the carriageway, and no permanent residual marks remain after their removal.

6 Marking

Each package containing black masking material shall be marked with the following information:

- a) a reference to this standard;
- b) the manufacturer's name and trade name;
- c) the type of black masking material and whether removable or non-removable;
- d) the quantity, size or shape;
- e) the batch number;
- f) the intended use and any limitations on use.

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