

Road traffic signs and internally illuminated bollards —

Part 8: Specification for traffic cones and cylinders

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The preparation of this British Standard was entrusted by the Road Engineering Standards Committee (RDB/-) to Technical Committee RDB/6 upon which the following bodies were represented:

- Aluminium Federation
- Association of Road Traffic Sign Makers
- British Plastics Federation
- British Precast Concrete Federation Ltd.
- British Rubber Manufacturers' Association
- British Sign Association
- British Steel Industry
- British Telecommunications plc
- Bus and Coach Council
- County Surveyors' Society
- Department of Transport (Highways)
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd)
- Electricity Supply Industry in England and Wales
- Institution of Civil Engineers
- Institution of Highways and Transportation
- Institution of Public Lighting Engineers
- Lighting Industry Federation Ltd.
- Paint Research Association
- Retroreflective Equipment Manufacturers' Association
- Vitreous Enamel Development Council
- Zinc Development Association

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- British Gas Corporation
- National Joint Utilities Group
- Coopted members

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 Traffic cone categories	1
4 Designations of traffic cones and cylinders	1
5 Colour	1
6 Traffic cones	1
7 Traffic cylinders	3
8 Marking and information	3
Appendix A Low temperature impact test for traffic cones and cylinders	6
Appendix B Stability of traffic cones	6
Appendix C Drop test for traffic cones	6
Appendix D Bending test for traffic cylinders	6
Appendix E Fatigue test for traffic cylinders	8
Figure 1 — Determination of the mass of a traffic cone	2
Figure 2 — Apparatus for low temperature impact test	5
Figure 3 — Movement of traffic cylinder in bending test	7
Figure 4 — Movement of traffic cylinder in fatigue test	8
Table 1 — Chromaticity coordinates and luminance factor for the red portions of traffic cones and cylinders (ordinary and fluorescent colours)	1
Table 2 — Marking of traffic cones and cylinders	4
Publications referred to	Inside back cover

Foreword

This Part of BS 873 has been prepared under the direction of the Road Engineering Standards Committee.

The requirements for traffic cones were first included in BS 873 in the 1973 edition of Part 2, which was withdrawn in 1984.

This is the first time that requirements for traffic cylinders have been included in a British Standard.

Traffic cones and traffic cylinders were first prescribed in statutory regulations in 1975, but they were in general use before this time.

Traffic cylinders were originally used to close to general traffic the emergency cross-over points in the central reservations of motorways. They are also now widely used to divide opposing traffic streams in contraflow systems during roadworks on dual carriageways.

As a result of subsequent experience and the advent of new materials and methods of construction, BS 873 is being revised to bring it up to date. Other Parts of the standard are as follows.

- *Part 1: Methods of test;*
- *Part 2: Specification for miscellaneous signs;*
- *Part 3: Specification for internally illuminated bollards;*
- *Part 4: Specification for road studs;*
- *Part 5: Specification for internally illuminated signs and external lighting luminaires;*
- *Part 6: Specification for retroreflective and non-retroreflective signs;*
- *Part 7: Specification for posts and fittings;*

NOTE BS 873-1 gives further details of the various Parts.

The tests described in this standard are such as to necessitate a programme of sampling. Such a procedure should be agreed between the purchaser and the manufacturer at the time of ordering. Attention is drawn to BS 2635, BS 6000, BS 6001 and BS 6002.

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 following.

The Traffic Signs Regulations and General Directions.

Information on the relationship between these regulations and BS 873 is given in appendix A of BS 873-1:1983.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, 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 Part of BS 873 specifies requirements for materials, dimensions, colorimetric and photometric properties for traffic cylinders and for two categories of traffic cones.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 873 the definitions in BS 873-1 apply, together with the following.

main body

all parts of traffic cones and cylinders except their white retroreflective portions

3 Traffic cone categories

3.1 Category A

Category A traffic cones shall comply with 6.4 and 6.7 when tested at a temperature of -16 ± 2 °C.

3.2 Category B

Category B traffic cones shall comply with 6.4 and 6.7 when tested at a temperature of -6^{+0}_{-2} °C

4 Designations of traffic cones and cylinders

Traffic cones and cylinders shall be designated as follows according to the photometric performance of their white retroreflective portions.

Designation 1 shall apply to cones and cylinders with retroreflective portions complying with 4.3.4.2 and Table 1 of BS 873-6:1983.

Designation 2 shall apply to cones and cylinders with retroreflective portions complying with 4.3.4.2 and Table 2 of BS 873-6:1983.

Designation 3 shall apply to cones with retroreflective portions complying with 4.3.4.2 and Table 3 of BS 873-6:1983.

5 Colour

5.1 The white portions of traffic cones and cylinders shall comply with 4.3.3 and 4.3.4.1 of BS 873-6:1983.

5.2 The red portions of traffic cones and cylinders shall comply with Table 1 of this Part of BS 873 when measured in accordance with clause 6 of BS 873-1:1983.

Table 1 — Chromaticity coordinates and luminance factor for the red portions of traffic cones and cylinders (ordinary and fluorescent colours)

Colour	Chromaticity coordinates of cornerpoints. (CIE Standard illuminant D ₆₅ , CIE 45/0 geometry)				Minimum luminance factor
	1	2	3	4	
Red	x	0.690	0.575	0.521	0.11
	y	0.310	0.316	0.371	

6 Traffic cones

6.1 Traffic cones shall be constructed of rubber or plastics materials. The sides shall make an angle of $10 \pm 2.5^\circ$ with the vertical axis of the cone. The diameter of the top of the cone shall be 60 ± 10 mm. The base shall be a polygon having not more than eight sides and shall be wholly within a circle of diameter $0.75 H$ where H is the height of the cone.

Cones shall be so designed that they will stack within each other without binding and without causing damage to the retroreflective surfaces. When two identical cones are stacked one on top of the other, the overall height of the two shall not exceed 1.2 times the height of one cone.

A circular hole with smooth edges and having a diameter of 33 ± 3 mm shall be provided in the top of each cone.

Cones shall have a white retroreflective portion which shall be securely applied or attached to prevent it becoming detached during normal use. The remainder of the cone above the base shall be red outside and inside.

NOTE 1 The dimensions and proportions of red to white should be as given in the appropriate statutory requirements (see appendix A of BS 873-1:1983).

NOTE 2 The red portions may also be retroreflective.

6.2 White retroreflective portions shall comply with 4.3.4.2 and Table 1, 2 or 3 of BS 873-6:1983 (see clause 4).

6.3 The minimum mass of the cone shall be as defined in Figure 1 when ballasted as recommended by the manufacturer.

6.4 When tested in accordance with Appendix A no part of the main body of the cone shall crack, fracture or split and the cone shall return to its nominal shape.