

Specfication for

Industrial safety helmets

The European Standard EN 397:1995, with the incorporation of amendment A1:2000, has the status of a British Standard

ICS: 13.340.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PSM/6, Industrial Safety Helmets, upon which the following bodies were represented:

- British Aggregate Construction Materials Industries
- British Medical Association
- Building Employers' Confederation
- Construction Health and Safety Group
- Electricity Association
- Federation of Civil Engineering Contractors
- Health and Safety Executive
- Home Office
- Industrial Safety (Protective Equipment) Manufacturers' Association
- Institution of Mechanical Engineers
- Ministry of Defence
- National Federation of Master Steeplejacks and Lightning Conductor Engineers
- Safety Equipment Distributors' Association
- Trades Union Congress

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

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Amendments issued since publication

Amd. No.	Date	Comments
10978	March 2001	Indicated by a sideline

The following BSI references relate to the work on this standard:
Committee reference PSM/6
Draft for comment 90/45987 DC

ISBN 0 580 23432 0

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National foreword

This British Standard has been prepared by Technical Committee PSM/6 and is the English language version of EN 397:1995 *Industrial safety helmets* including amendment A1:2000, published by the European Committee for Standardization (CEN). It supersedes BS 5240-1:1987, which is withdrawn.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 19 and a back cover.

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ICS 13.340.10

Descriptors: work safety, accident prevention, helmets, definitions, dimensions, characteristics, shock resistance, tests, marking, specifications

English version

Industrial safety helmets

(includes amendment A1:2000)

Casques de protection pour l'industrie
(inclut l'amendement A1:2000)

Industrieschutzhelme
(enthält Änderung A1:2000)

This European Standard was approved by CEN on 1995-02-10. Amendment A1 was approved by CEN on 2000-02-25. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Czech Republic, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 158, Protective helmets, the secretariat of which is held by BSI.

This European Standard has been prepared under a Mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 1995, and conflicting national standards shall be withdrawn at the latest by August 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Foreword to amendment A1

This amendment EN 397:1995/A1:2000 to EN 397:1995 has been prepared by the Technical Committee CEN/TC 158, Head protection, the secretariat of which is held by BSI.

This amendment to the European Standard EN 397:1995 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

This amendment to the European Standard EN 397:1995 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This European Standard specifies physical and performance requirements, methods of test and marking requirements for industrial safety helmets. The mandatory requirements apply to helmets for general use in industry. Additional optional performance requirements are included to apply only where specifically claimed by the helmet manufacturer. Industrial safety helmets are intended primarily to provide protection to the wearer against falling objects and consequential brain injury and skull fracture.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 373:1993, *Protective clothing — Assessment of resistance of materials to molten metal splash*.

EN 960:1994, *Headforms for use in the testing of protective helmets*.

ISO 472, *Plastics — Vocabulary*.

ISO 4892:1981, *Plastics — Methods of exposure to laboratory light sources*.

3 Definitions

For the purposes of this standard the following definitions apply:

3.1

industrial safety helmet

headgear, hereinafter referred to as a “helmet”, primarily intended to protect the upper part of a wearer’s head against injury from falling objects

3.2

shell

the hard, smoothly finished material that provides the general outer form of the helmet

3.3

peak

an extension of the shell above the eyes

3.4

brim

a rim surrounding the shell

NOTE A brim may include a rain gutter.

3.5 harness

The complete assembly that provides a means:

- a) of maintaining the helmet in position on the head; and/or
- b) of absorbing kinetic energy during an impact.

NOTE A harness includes a headband and napestrap and may also include the items defined in 3.5.3 to 3.5.6.

3.5.1

headband

the part of the harness completely or partly surrounding the head above the eyes at approximately the largest horizontal circumference of the head

NOTE The headband may include a nape strap.

3.5.2

nape strap

the adjustable strap that fits behind the head below the plane of the headband

NOTE A nape strap may be an integral part of the headband.

3.5.3

cradle

the assembly of the parts of the harness in contact with the head, excluding the headband and nape strap

NOTE A cradle may be either fixed or adjustable.

3.5.4

cushioning

material to improve wearing comfort

3.5.5

anti-concussion tapes

supporting straps which absorb kinetic energy during an impact

3.5.6

comfort band or sweatband

an accessory to cover at least the inner front surface of the headband to improve wearer comfort

3.6

protective padding

material contributing to the absorption of kinetic energy during an impact

3.7

ventilation holes

holes provided in the shell which may allow circulation of air inside the helmet

3.8

chin strap

a strap which fits under the chin to help secure the helmet on the head

3.9

chin strap anchorage

the means by which the material of the chin strap is attached to the helmet. This includes, for example:

- a) the component(s) fitted to the ends of the chinstrap material for this purpose;
- b) that part of the helmet shell or of the headband where the chin strap is attached.

3.10

helmet accessories

any additional parts for special purposes such as chin strap, neck protector, drawlace, and attachment devices for lamp, cable, face protection and hearing protection

3.11

wearing height

the vertical distance from the lower edge of the headband to the highest point of the headform on which the helmet is mounted, measured at the front (midway between the sides of the headform) and at the sides (midway between the front and back of the headform), whichever gives the greater distance

3.12

external vertical distance

the vertical distance between the top of the headform on which the helmet is mounted and the highest point on the outside surface of the helmet shell

NOTE This represents the height of the outer surface of the shell above the head when the helmet is worn, and relates to clearance under low roofs etc.

3.13

internal vertical distance

the difference in level of the highest point on the outside surface of the helmet shell when the helmet is mounted on the headform:

- 1) with the cradle present; and
- 2) with the cradle and any protective padding in the crown area removed, so that the shell rests on the headform.

NOTE This represents the height of the inner surface of the shell above the head when the helmet is worn, and relates to stability.