INTERNATIONAL STANDARD ISO 3873

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Industrial safety helmets

Casques de protection pour l'industrie

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3873 was drawn up by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, and was circulated to the member bodies in August 1975.

It has been approved by the member bodies of the following countries :

Australia	Israel	Spain
Austria	Italy	Sweden
Bulgaria	Mexico	Switzerland
Denmark	Netherlands	Turkey
France	New Zealand	United Kingdom
Germany	Norway	U.S.S.R.
Hungary	Poland	Yugoslavia
Iran	Romania	
Ireland	South Africa, Rep. of	

The member body of the following country expressed disapproval of the document on technical grounds :

Belgium

Printed in Switzerland

Industrial safety helmets

1 SCOPE

This International Standard specifies physical and performance requirements, methods of test and marking requirements for industrial safety helmets.

2 FIELD OF APPLICATION

The mandatory requirements apply to helmets for general use in industry. Additional optional performance requirements are included to apply only where specifically called for.

3 DEFINITIONS

3.1 safety helmet : A helmet primarily intended to protect the upper part of a wearer's head against a blow.

3.2 shell : The hard, smoothly finished material that provides the general form of the helmet.

3.3 peak : A permanent extension of the shell above the eyes.

3.4 brim : A rim surrounding the shell.

3.5 harness : The complete assembly by means of which the helmet is maintained in position on the head, and which may provide a means of absorbing energy. It consists for example of the following items :

3.5.1 headband : The part of the harness surrounding the head at the base of the skull.

3.5.2 cradle : The fixed or adjustable assembly of the parts of the harness in contact with the head.

3.5.3 cushioning : Material to improve wearing comfort.

3.5.4 anti-concussion tapes : Supporting straps which absorb shock.

3.6 protective padding : Material contributing to the absorption of kinetic energy during an impact.

3.7 ventilation holes : Holes provided in the shell to permit circulation of air inside the helmet.

3.8 helmet accessories : Any additional parts for special purposes such as chin strap, neck protector, nape strap, drawlace and attachment devices for lamp and cable.

3.9 wearing height : Vertical distance from the lower edge of the headband to the highest point of the head or headform.

3.10 vertical clearance : Vertical distance between the top of the headform and the inside of the shell.

3.11 horizontal clearance : Horizontal distance between the headband and the inside of the shell or any protruding part of the inside of the shell.

4 PHYSICAL REQUIREMENTS

4.1 Materials

Recommendations for general consideration of materials are given in annex B.

4.2 General construction

Recommendations for general consideration of construction of helmets are given in annex B.

4.3 Shell

The shell shall have as uniform a strength as possible and shall not be specially reinforced at any point. This does not exclude a gradual increase in shell thickness or ribs or means for attaching the harness but does exclude other highly localized reinforcement.

The outer surface shall be smoothly finished and all edges shall be smooth and rounded.

The profile at the front edge of the shell shall not prevent the wearing of spectacles or goggles.

4.4 Vertical clearance

When measured under the conditions stated in 6.4 the vertical clearance shall be not less than 25 mm and not more than 50 mm.

4.5 Horizontal clearance

When measured under the conditions stated in 6.4 the horizontal clearance shall be not less than 5 mm and not more than 20 mm.