



Rules of Hockey: 2004

Field, Pitch and Equipment Specifications

Effective from 1 January 2004

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Responsibility and Liability

This publication is a supplement to the Rules of Hockey.

Participants in hockey must be aware of the Rules of Hockey and of other information in this publication. They are expected to perform according to the Rules.

Emphasis is placed on safety. Everyone involved in the game must act with consideration for the safety of others. Relevant national legislation must be observed. Players must ensure that their equipment does not constitute a danger to themselves or to others by virtue of its quality, materials or design.

The International Hockey Federation (FIH) does not accept responsibility for any defects or non-compliance of facilities and is not liable for any consequences resulting from their use. Any verification of facilities or equipment conducted before a match is limited to ensuring an overall appearance of compliance and sporting requirements.

Implementation and Authority

The Rules of Hockey including the information in this publication apply to all hockey players and officials. National Associations have discretion to decide the date of implementation at national level. The date of implementation for international competition is 1 January 2004.

The Rules of Hockey including this publication are issued by the Hockey Rules Board under the authority of the International Hockey Federation. Copyright is held by the International Hockey Federation.

Availability of the Rules

Information about the availability of the Rules on the FIH website, about the purchase of Rules books and about the availability of other information is included at the end of this publication.

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INTRODUCTION

THE CONTENT OF THIS PUBLICATION

In the past the booklet containing the Rules of Hockey has included detailed specifications of the field/pitch and its equipment, the stick, the ball and goalkeepers' equipment. With effect from 2004 this information is instead being provided in this separate publication.

This enables the Hockey Rules Book to concentrate on what players and officials need to know about playing and umpiring the game. Additional technical information which some participants and suppliers need to know is covered by this supplementary publication.

The 2004 edition of the Rules of Hockey is presented in a new style which aims to make the Rules easier to understand for everyone involved in the game so that we can play to common and enjoyable standards. This clearer format and content has been incorporated in this publication.

The descriptions in this publication therefore differ in detail from those in previous versions of the Rules of Hockey but the overall specifications and procedures they describe have not been changed other than as mentioned below.

This new approach has enabled the technical specifications for outdoor (or field) and indoor hockey to be brought together in this document. This is sensible because the specifications of the stick, ball and goalkeepers' equipment are the same for both disciplines.

IMPLEMENTATION

As noted inside the cover of this publication, for international competition the date of implementation of the specifications included here is 1 January 2004. National Associations have discretion to decide the date of implementation at national level.

For the future, it has been agreed that each set of Rules will be implemented from 1 January annually.

CHANGES IN SPECIFICATIONS

The only significant changes incorporated in this publication relate to the stick.

Any concave or convex curvature across the playing side of the head of the stick has been restricted (Rule 3.3.f). A limit has been introduced to the extent of any bow or rake along the length of the stick (Rule 3.3.k).

DEVELOPMENT OF THE RULES

The Hockey Rules Board and more generally the International Hockey Federation are keen to promote the development of the game. This includes developments in fields/pitches and equipment.

Any suggestions for developments will be warmly welcomed on behalf of the Board.

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1 Field and Field Equipment (Outdoor Hockey)

- 1.1 The field of play is rectangular, 91.40 metres long bounded by side-lines and 55.00 metres wide bounded by back-lines.

Minimum "run-off" areas are recommended outside the back-lines (5 metres) and side-lines (4 metres).

- 1.2 Markings:

- a no marks other than those described in this Rule are to be made on the playing surface
- b lines are 75 mm wide and must be clearly marked along their entire length
- c the side-lines and back-lines and all markings enclosed between them are part of the field
- d all marks must be made in white.

- 1.3 Lines and other marks:

- a side-lines: 91.40 metres long perimeter lines
- b back-lines: 55.00 metres long perimeter lines
- c goal-lines: the parts of the back-lines between the goal-posts
- d centre-line: across the middle of the field
- e 22.90 metres lines across the field 22.90 metres from each back-line as measured between the furthest edges of each line

The areas enclosed by and including the 22.90 metres lines, the relevant part of the side-lines, and the back-line are known as the 23 metres areas.

- f lines 300 mm long marked outside the field on each side-line with the further edge of the lines 14.63 metres from and parallel to the outer edge of the back-lines

- g lines 300 mm long marked outside the field on each side-line with the further edge of the lines 5 metres from and parallel to the outer edge of the back-lines
- h lines 300 mm long marked outside the field on each back-line on both sides of the goal at 5 metres and 10 metres from the outer edge of the nearer goal-post, as measured between the furthest edges of each line

The markings described in Rules 1.3 f, g and h were moved from inside to outside the field with effect from 2001. The distances in Rule 1.3 h were converted to metric at the same time. These revised markings apply to all new and re-marked fields. However, existing fields with the previously specified markings may continue to be used.

- i lines 150 mm long marked outside the field on each back-line 1.83 metres from the centre of the back-line, as measured between the nearest edges of these lines
- j penalty spots 150 mm in diameter marked in front of the centre of each goal with the centre of each spot 6.40 metres from the inner edge of the goal-line.

1.4 Circles:

- a lines 3.66 metres long and parallel to the back-lines are marked inside the field with their centres in line with the centres of the back-lines; the distance from the outside edges of these 3.66 metres lines to the outside edges of the back-lines is 14.63 metres
- b these lines are continued in uninterrupted arcs in both directions to meet the back-lines in the form of quarter-circles with centres at the inside front corner of the nearer goal-posts
- c the 3.66 metres line and the arcs are called the circle-lines; the spaces enclosed by these lines, including the lines themselves, are called the circles
- d broken lines are marked with their outer edges 5 metres from the outer edge of each circle-line; each broken line starts with

a solid section at the top centre of the circle-line and each solid section is 300 mm long with gaps between the solid sections 3 metres long

These broken lines became mandatory for international matches with effect from 1 June 2000. Their adoption for other matches is at the discretion of National Associations.

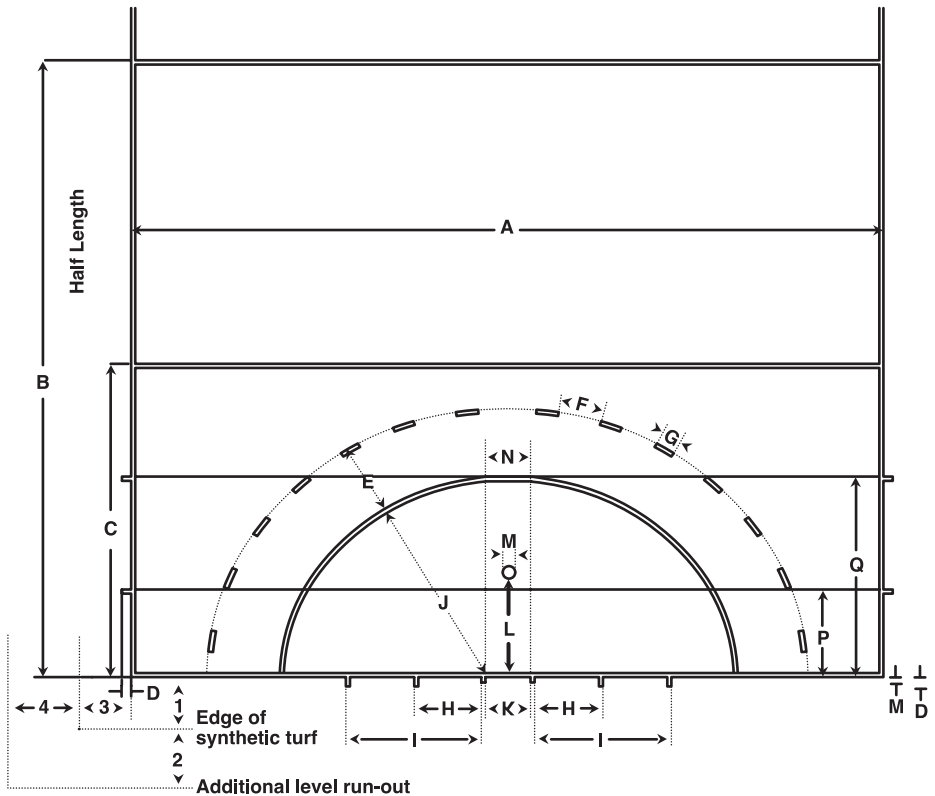


Figure 1 : Field of Play

Table 1: Field Dimensions

Code	Metres	Code	Metres
A	55.00	M	0.15
B	45.70	N	3.66
C	22.90	P	5.00
D	0.30	Q	14.63
E	5.00	R	0.15
F	3.00	1	minimum 3.00
G	0.30	2	2.00
H*	4.98*	(1 + 2)	minimum 5.00
I*	9.98*	3	minimum 3.00
J	14.63	4	1.00
K	3.66	(3 + 4)	minimum 4.00
L	6.4		

* Dimensions H and I are measured from the goal-post line and not from the goal-post itself; the dimensions from the goal-post are 5.00 metres and 10.00 metres respectively.

1.5 Goals:

- a two vertical goal-posts joined by a horizontal cross-bar are placed at the centre of each back-line on the external marks
- b the goal-posts and cross-bar are white, rectangular in cross section, 50 mm wide and between 50 mm and 75 mm deep
- c the goal-posts must not extend vertically beyond the cross-bar and the cross-bar must not extend horizontally beyond the goal-posts

- d the distance between the inner edges of the goal-posts is 3.66 metres and the distance from the lower edge of the cross-bar to the ground is 2.14 metres
- e the space outside the field, behind the goal-posts and cross-bar and enclosed by the net, side-boards and backboard is a minimum of 0.90 metres deep at the cross-bar and a minimum of 1.22 metres deep at ground-level.

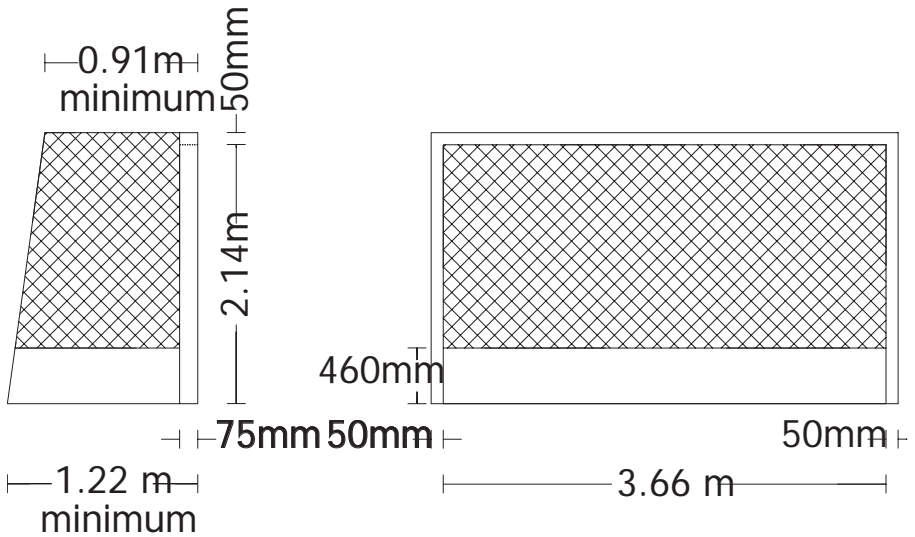
1.6 Side-boards and back-boards:

- a side-boards are 1.22 metres long and 460 mm high
- b back-boards are 3.66 metres long and 460 mm high
- c side-boards are positioned on the ground at right angles to the back-line and are fixed to the back of the goal-posts without increasing their width
- d back-boards are positioned on the ground at right angles to the side-boards and parallel to the back-line, and are fixed to the end of the side-boards
- e side-boards and back-boards are of a dark colour on the inside.

1.7 Nets:

- a the minimum mesh size is 45 mm
- b attachment to the back of the goal-posts and cross-bar is at intervals of not more than 150 mm
- c the nets hang outside the side-boards and back-board
- d the nets are secured so as to prevent the ball passing between the net and the goal-posts, cross-bar, side-boards and back-boards
- e the nets are fitted loosely to prevent the ball rebounding.

Figure 2 : Goal



1.8 Flag-posts:

- a flag-posts are between 1.20 and 1.50 metres in height
- b flag-posts are placed at each corner of the field
- c flag-posts must not be dangerous
- d if unbreakable, flag-posts must be attached to a spring base
- e flag-posts carry flags, not exceeding 300 mm in width or length

2 Pitch and Pitch Equipment (Indoor Hockey)

- 2.1 The pitch is rectangular, 36.00 to 44.00 metres long bounded by side-boards and 18.00 to 22.00 metres wide bounded by back-lines.

Wherever possible the size of a pitch should be the maximum permitted. Where the maximum is not possible, a width of 21 metres is recommended so that the circle lines meet the back-lines before they reach the side-boards.

Minimum "run-off" areas are recommended outside the back-lines (3 metres) and side-lines (1 metre).

- 2.2 Markings:

- a no marks other than those described in this Rule are to be made on the playing surface

If indoor hockey is played on a surface marked with lines for other sports which cannot easily be removed, they must be a distinctive colour.

- b lines are 50 mm wide and must be clearly marked along their entire length
- c the back-lines and all markings enclosed between them and the side-boards are part of the pitch
- d all marks must be made in a colour which contrasts with the playing surface.

- 2.3 Pitch side-boards:

- a mark the 36.00 to 44.00 metres long perimeter of the pitch
- b are based of a square 100 mm cross-section
- c the upright surface facing the pitch is inclined by 10 mm towards the pitch.

Side-boards must be made of wood or materials with similar physical properties. They must not have fittings or supports which are dangerous to players or umpires.

2.4 Lines and other marks:

- a back-lines: 18.00 to 22.00 metres long perimeter lines
- b goal-lines: the parts of the back-lines between the goal-posts
- c centre-line: across the middle of the pitch
- d lines 300 mm long marked inside the pitch on each back-line on both sides of the goal at 6 metres from the outer edge of the nearer goal-post, as measured between the furthest edges of each line
- e lines 150 mm long marked outside the pitch on each back-line 1.50 metres from the centre of the back-line, as measured between the nearest edges of these lines
- f penalty spots 100 mm in diameter marked in front of the centre of each goal with the centre of each spot 7 metres from the inner edge of the goal-line.

2.5 Circles:

- a lines 3.00 metres long and parallel to the back-lines are marked inside the pitch with their centres in line with the centres of the back-lines; the distance from the outside edges of these 3.00 metres lines to the outside edges of the back-lines is 9.00 metres
- b these lines are continued in uninterrupted arcs in both directions to meet the back-lines in the form of quarter-circles with centres at the inside front corner of the nearer goal-posts
- c the 3.00 metres line and the arcs are called the circle-lines; the spaces enclosed by these lines, including the lines themselves, are called the circles

Figure 3 : Indoor Pitch

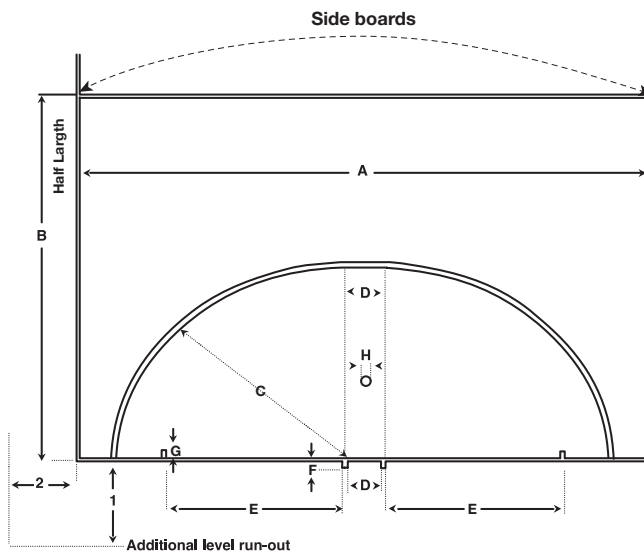


Table 2: Indoor Pitch Dimensions

Code	Metres	Code	Metres
A	minimum 18.00 maximum 22.00	F	0.15
B	minimum 18.00 maximum 22.00	G	0.30
C	9.00	H	0.10
D	3.00	1	minimum 3.00
E*	6.03	2	minimum 1.00

* Dimension E is measured from the goal-post line and not from the goal-post itself; the dimension from the goal-post is 6.00 metres.

2.6 Goals:

- a two vertical goal-posts joined by a horizontal cross-bar are placed at the centre of each back-line on the external marks
- b the goal-posts and cross-bar are white, rectangular in cross section, 80 mm wide and 80 mm deep
- c the goal-posts must not extend vertically beyond the cross-bar and the cross-bar must not extend horizontally beyond the goal-posts
- d the distance between the inner edges of the goal-posts is 3.00 metres and the distance from the lower edge of the cross-bar to the ground is 2.00 metres
- e the space outside the pitch, behind the goal-posts and cross-bar and enclosed by the net is a minimum of 800 mm deep at the cross-bar and a minimum of 1.00 metres deep at ground-level.

Goal side-boards and back-boards are not mandatory but if fitted should conform to the following specification:

- a goal side-boards are 1.00 metres long and 460 mm high*
- b back-boards are 3.00 metres long and 460 mm high*
- c goal side-boards are positioned on the ground at right angles to the back-line and are fixed to the back of the goal-posts without increasing their width*
- d back-boards are positioned on the ground at right angles to the goal side-boards and parallel to the back-line, and are fixed to the end of the goal side-boards*
- e goal side-boards and back-boards are of a dark colour on the inside.*

2.7 Nets:

- a the minimum mesh size is 45 mm
- b attachment to the back of the goal-posts and cross-bar is at intervals of not more than 150 mm
- c the nets hang outside the goal side-boards and back-board if fitted
- d the nets are secured so as to prevent the ball passing between the net and the goal-posts and cross-bar and between the net and the side-boards and back-boards if fitted
- e the nets are fitted loosely to prevent the ball rebounding.

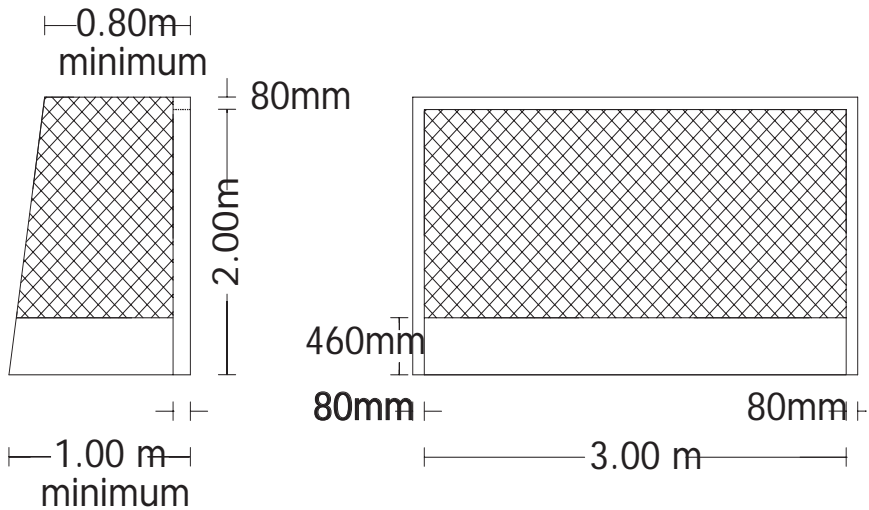


Figure 4 : Indoor Goal

2.8 Benches and table:

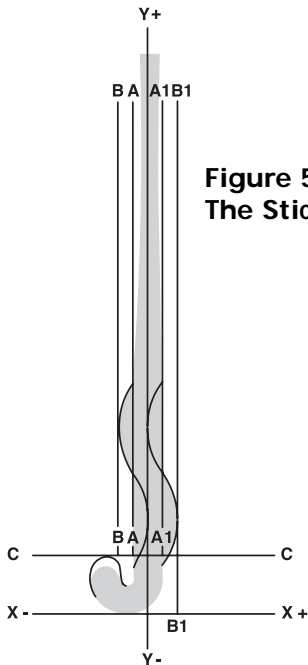
- a a bench for each team is placed outside and along one side of the pitch
- b a table for timekeeping is placed outside and at the centre of the pitch on the same side as and between the team benches.

The position of the benches and table must not be dangerous to players or umpires.

3 Stick

3.1 The stick:

- a the stick has had a traditional shape which will be retained
- b no particular handle or head shape or design has been approved, but the introduction of extreme shapes or designs outside the specified parameters will not be permitted.



**Figure 5 :
The Stick**

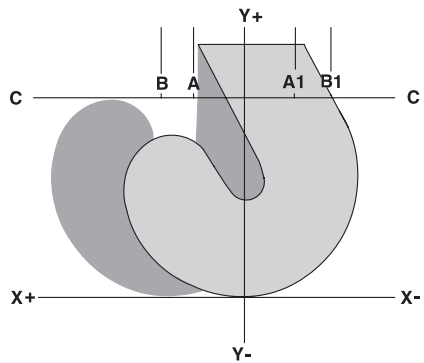


Figure 6 : The Head of the Stick

3.2 Diagrams of the stick:

- a descriptions and specifications in this Rule relate to figures 5 and 6
- b the stick comprises two identifiable parts, the handle and the head
- c the stick is shown in both figures with the handle in a vertical position, in the main perpendicular to a level horizontal surface (the X-axis)
- d the curved base of the head is shown placed on the X-axis, which is the start of its vertical length (the Y-axis)
- e the head terminates at a line C - C drawn parallel to the X-axis, 100 mm along the Y-axis, in a positive direction (towards Y+)
- f the Y-axis is perpendicular to the X-axis; for measurement purposes the stick is aligned so that the Y-axis passes through the centre of the top of the handle
- g the handle starts at the line C - C and continues in the direction Y+.

3.3 Shape and dimensions of the stick:

- a the entire stick must be smooth and must not have any rough or sharp parts
- b the handle and head must be of one smooth continuous cross-section along the line C - C
- c the head must be a 'J' or 'U' shape the upturned or open end of which is limited by the line C - C
- d the head is not limited along the X-axis
- e the head must be flat on the left hand side only (the side which is to the player's left when the stick is held with the open end of the head pointing directly away from the player's front, i.e. the side shown in the diagrams)

- f the flat playing side of the head of the stick and any continuation of it along the handle must be smooth and in a single plane with any convex or concave deviation across that plane being no more than 4 mm in any direction

Deviation across the playing side of the head of the stick is tested by placing a straight edge across this side at any point along the head and using a standard pointed depth gauge. The depth of concave curvature below the straight edge must not exceed 4 mm; the sum of depths below the straight edge at the edges of the stick must not exceed 8 mm.

- g inclusive of any additional coverings used, the stick must be able to pass through a ring with an interior diameter of 51 mm
- h the lines A - A and A1 - A1 in the diagrams are 51 mm apart parallel to and equidistant from the Y-axis
- i the lines B - B and B1 - B1 are 20 mm from A - A and A1 - A1 respectively
- j it is permitted for the handle to be bent or curved to protrude beyond the line A - A once only along the length of the Y-axis, to the limiting line B - B at maximum

The shape and dimensions of the stick are tested using a flat surface marked with the lines shown in figure 5. The stick is laid playing side down on the surface.

- k any curvature along the length of the stick (the rake or bow) must have a continuous smooth profile along the whole length, must occur along the face side or the back of the stick but not both and is limited to a depth of 50 mm.

The rake or bow is tested using a pointed wedge the point of which is 50 mm from the flat base. The stick is laid on a flat surface. The wedge must not pass completely under the stick at any place along its length.

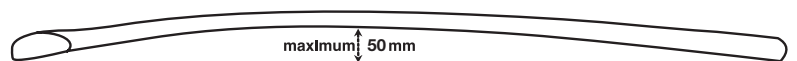


Figure 7 : The Stick Rake or Bow

3.4 Playing side of the stick:

- a the playing side is the entire side shown in the diagrams and the edges of that side
- b the edges and the non-playing side must be rounded and must have a continuous smooth profile.

Players must be aware that manufacturers may refuse to replace sticks which have been broken or damaged as a consequence of using the edge of the stick to hit the ball because many sticks have not been made for use in this way.

3.5 The total weight of the stick must not exceed 737 grams.

3.6 Ball speed must not be greater than 98% of stick head speed under test conditions.

Ball speed is determined over a series of 5 tests at a stick speed of 80km/hour in the simulator of an FIH approved laboratory. Ball speed is calculated from the time the ball passes two measuring points and is expressed as a ratio to the specified stick speed.

FIH approved hockey balls are used.

The test is carried out at prevailing laboratory conditions with a temperature of approximately 20°C and relative humidity of approximately 50%.

3.7 Materials:

- a the stick and possible additions may be made of or contain any material other than metal or metallic components, provided it is fit for the purpose of playing hockey and is not hazardous
- b the application of tapes and resins is permitted provided that the stick surface remains smooth and that it conforms to the stick specifications.

- 3.8 The FIH reserves the right to prohibit any stick which, in the opinion of the Hockey Rules Board, is unsafe or likely to have a detrimental impact on playing the game.

4 Ball

- 4.1 The ball:
- a is spherical
 - b has a circumference of between 224 mm and 235 mm
 - c weighs between 156 grams and 163 grams
 - d is made of any material and coloured white (or as agreed)
 - e is hard with a smooth surface but indentations are permitted.

5 Goalkeeper's Equipment

- 5.1 Protective headgear is compulsory for goalkeepers except when taking a penalty stroke.

A helmet incorporating fixed full-face protection and cover for the entire head and throat is recommended.

It is also recommended that goalkeepers wear other protective equipment. The following are permitted for use only by goalkeepers: body, upper arm, elbow, forearm, hand and thigh protectors, leg guards and kickers.

- 5.2 Hand protectors:
- a each have a maximum width of 228 mm and length of 355 mm when laid flat, palm upwards
 - b must not have any additions to retain the stick when the stick is not held in the hand.

- 5.3 Leg guards: each have a maximum width of 300mm when on the leg of the goalkeeper.

The dimensions of goalkeeper's hand protectors and leg guards are measured using gauges with the relevant internal dimensions.

ADDITIONAL INFORMATION AVAILABLE

The International Hockey Federation can provide information on various topics to assist participation in the sport.

THE RULES OF HOCKEY

The Rules of playing outdoor (or field) hockey and indoor hockey respectively are available in the following publications:

- the Rules of Hockey
- the Rules of Indoor Hockey.

Each set of Rules deals with playing and umpiring the game.

SYNTHETIC FIELDS AND LIGHTING (OUTDOOR)

Information is available about:

- performance requirements
- irrigation recommendations
- guidelines for care and maintenance
- approved synthetic pitch manufacturers
- artificial lighting.

TOURNAMENT REGULATIONS

Information includes:

- roles and responsibilities of tournament officials
- specification of team clothing, equipment and colours
- advertising
- interruptions of a match
- procedures for handling protests
- competition plan and ranking procedure (including a penalty stroke competition).

UMPIRING

Information of interest to umpires includes:

- grading criteria for FIH umpires
- handbook for international umpires including information about umpiring skills, tournament and mental preparation and a fitness programme
- manual for umpires managers including information about duties, umpire coaching, fitness testing, performance feedback and assessor forms.

HOCKEY DEVELOPMENT RESOURCES

Various materials produced by hockey participants throughout the world are available in print, on video and on compact-disk. They include:

- beginner, development and elite coaching
- school and youth programmes
- mini-hockey
- course manuals.

The information above and additional copies of this publication are available on the FIH website:

www.FIHockey.org

or from the FIH Office:

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