



International
Handball
Federation

XIII.

Technical Regulations

a) Ball

Regulations

Edition: 21 December 2025



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Article 1

1. General Principles

These Regulations are to define the IHF criteria for handballs which have to be met. In addition, the criteria concerned apply for the handball to be provided with the IHF seal of approval.

There are three categories of IHF approval:

IHF APPROVED PRO: for all official IHF matches as well as other international and elite level national matches.

IHF APPROVED: for all elite level national matches.

IHF Seal of Approval for Testing Purposes.



Article 2

2. Technical Specifications for Handballs

2.1. Technical requirements according to Rule 3 of the Rules of the Game and Appendix 3

1. The handballs shall be produced of a leather or plastic casing. They must be round and the outer material must not be shiny or smooth.

2. The following three different categories of handballs shall apply:

a) Handballs played with resin

The following ball sizes (i.e. circumference and weight) shall be used for the different age categories:

- 58 to 60 cm in circumference and 425 to 475 g in weight (IHF size 3) for men's senior and men's youth (aged 16 and older) players
- 54 to 56 cm in circumference and 325 to 375 g in weight (IHF size 2) for women's senior, women's youth (aged 14 and older) and men's youth (aged 12 to 16) players
- 50 to 52 cm in circumference and 290 to 330 g in weight (IHF size 1) for women's youth (aged 8 to 14) and men's youth (aged 8 to 12) players

b) Handballs played without resin

The following ball sizes (i.e. circumference and weight) shall be used for the different age categories:

- 55.5 to 57.5 cm in circumference and 400 to 425 g in weight (IHF size 3) for men's senior and men's youth (aged 16 and older) players
- 51.5 to 53.5 cm in circumference and 300 to 325 g in weight (IHF size 2) for women's senior, women's youth (aged 14 and older) and men's youth (aged 12 to 16) players

- 49 to 51 cm in circumference and 290 to 315 g in weight (IHF size 1) for women's youth (aged 8 to 14) and men's youth (aged 8 to 12) players

c) Handballs for beginners

For beginners, different handballs may be used:

- 46 to 48 cm in circumference and 255 to 280 g in weight (IHF size 0) for children (aged 8 and younger) or beginners of different age groups
- 44 to 46 cm in circumference and 165 to 190 g in weight (size 00) for children or other beginners
- 46 to 48 cm in circumference and 190 to 225 g in weight (non-inflatable squeeze balls) for children or other beginners
- 46 to 48 cm in circumference and 190 to 225 g in weight (non-inflatable sponge balls)

Note: During use the handballs must retain their weight, shape and bouncing capacity.



Article 3

3. Special Specifications of Leather Handballs

1. Leather balls must be made of high quality full-grained leather. After tanning, the leather must:
 - have a high tensile and breaking strength (approximately 95kg/cm²)
 - be soft and supple to the touch
 - have fault-free and resistant grains and seams which exclude all risk of injury and do not fray or split.
2. The leather ball shall consist of at least 32 panels.
3. Fully synthetic sewing threads shall be used.
4. The bladders are made of latex or a similar, equivalent material with a stretching capacity of at least 600%.
5. The valve system of the bladder must be simple and effective to use.



Article 4

4. Special Specifications of Plastic Handballs

Ball casings or bladders made of plastic must be a fully equivalent substitute for a leather casing or rubber bladder in every respect.



Article 5

5. IHF Seal of Approval

5.1. Awarding the IHF seal of approval

1. The IHF seal of approval may be awarded upon application to any ball manufacturer if the manufacturer fulfils the technical and financial requirements.
2. The application shall be made in writing, with the necessary technical documentation, in English, French or German to the IHF Head Office.
3. To allow the technical requirements to be checked, at least six balls of each type of ball shall be sent, free of charge, to the IHF together with the application, while at least seven balls of each type of ball shall be sent, free of charge, to the service provider of the IHF.
4. A testing fee shall be charged for the inspection.
5. The IHF reserves the right to withdraw the seal of approval for balls if technical defects identified on subsequent retesting are not eliminated or if financial commitments made are not fulfilled.
6. The place of jurisdiction is Basle/Switzerland.
7. Upon application, the IHF may award an IHF seal of approval to a ball manufacturer only for ball testing purposes in accordance with Article 21.1 of the IHF Statutes. The same application procedure as indicated above shall be followed. In addition to the costs incurred in connection with the ball inspection as outlined above, all costs related to the season test as per Article 21.1 of the IHF Statutes shall be covered by the ball manufacturer.

5.2. Identification of IHF approved balls

IHF approved balls must be clearly printed, in colour, with the official IHF logo and the designation 'IHF APPROVED PRO', 'IHF APPROVED' or 'IHF Seal of Approval for Testing Purposes' as follows:

a) Handballs played with resin

IHF APPROVED PRO



IHF APPROVED PRO



IHF APPROVED



IHF APPROVED



b) Handballs played without resin

IHF APPROVED PRO
RESIN FREE



IHF APPROVED PRO
RESIN FREE



IHF APPROVED
RESIN FREE



IHF APPROVED
RESIN FREE



c) Handballs played with/without resin for testing purposes

IHF SEAL OF APPROVAL
FOR TESTING PURPOSES



IHF SEAL OF APPROVAL
FOR TESTING PURPOSES



5.3. Use of IHF approved balls

1. Only balls with the IHF seal of approval may be used at official IHF competitions.
2. A list of ball manufacturers with the IHF seal of approval is kept by the IHF Head Office and is available free of charge.



Article 6

6. Licence Fee

1. On payment of the licence fee following the approval of the IHF and the service provider of the IHF, the manufacturer gains the right to affix the IHF seal of approval to balls of the tested and approved type. The licence takes the form of a contract valid for one year drawn up by the IHF Head Office.
2. The licence fee shall be paid to the IHF bank account on conclusion of the contract.
3. The contract shall be renewed upon request of the ball manufacturer and after IHF's approval. Any renewal shall be subject to a new contract between the ball manufacturer and the IHF.



Appendix 1



TEST FORM FOR HANDBALLS



Manufacturer:

Article:

Data:

Circumference in cm:

Weight in g:

New:

After use:

Bouncing properties:

Notes to Articles 2 and 3 of the IHF Ball Regulations:

2.1.1:

2.1.2:

.....

.....

3.1:

.....

3.2:

3.4:

3.5:

Remarks concerning the awarding of the IHF seal of approval:

.....

.....

.....
Place / Date

.....
Name / Signature of examiner



Appendix 2



STANDARD CONTRACT - BALLS -



C O N T R A C T

between the

INTERNATIONAL HANDBALL FEDERATION, hereinafter named 'IHF',

with its Head Office at
Peter Merian-Strasse 23
P.O. Box
CH-4002 Basle
Switzerland

and represented by

.....

and

.....

hereinafter named 'Ball Manufacturer',

with its headquarters in

.....

.....

.....

and represented by

.....

§ 1 Subject of the contract

The IHF shall grant the Ball Manufacturer

the IHF seal of approval for handballs

and, in accordance with the IHF Ball Regulations,

the right to imprint the balls it produces

as mentioned under § 4 with the clear coloured imprint,

containing the IHF logo and

the designation 'IHF APPROVED PRO', 'IHF APPROVED' or 'IHF Seal of Approval for Testing Purposes' as follows:

a) Handballs played with resin



b) Handballs played without resin



c) Handballs played with/without resin for testing purposes



A sample of the IHF logo shall be provided to the Ball Manufacturer, if necessary, at the time the contract comes into force.

In addition to the above-mentioned designations, the Ball Manufacturer is entitled to refer to the test report produced by the service provider of the IHF regarding the testing of the balls concerned. Such

right may only be exercised from the issuance date of the test report by the service provider of the IHF until the end date of the granting of the IHF seal of approval. Shall the contract be renewed, in accordance with § 6 of the present contract, the Ball Manufacturer may refer to the test report during up to three consecutive contracts, thus for a maximum of three years.

In case the Ball Manufacturer wishes to renew the contract after the third consecutive contract has expired, a new report shall be produced by the service provider of the IHF.

The reference must be made as follows:

"Empa Test Report No. [corresponding test report number] dated [corresponding Empa test report's issuance date]"

The Ball Manufacturer is prohibited to use the logo of the service provider of the IHF.

The stipulations in the IHF's current Ball Regulations, which form an integral part of this contract and which both parties to the contract recognise in full, shall be authoritative.

§ 2 Obligations of the Ball Manufacturer

1. The Ball Manufacturer must send the ball(s) to be tested to the IHF as well as to the service provider of the IHF. Seven (7) balls, at least, of each type, if applicable, shall be provided to the service provider of the IHF. One ball will be retained by the service provider of the IHF for archive purposes. Six (6) balls, at least, of each type, if applicable, shall be provided to the IHF to conduct the ball grip test. One ball will be retained by the IHF for archive purposes.
2. The Ball Manufacturer must provide the IHF with all relevant information/documentation in order to conduct the testing of the balls. This information/documentation includes, but is not limited to:
 - Ball type and size
 - Ball name
 - Ball Manufacturer's name and address

§ 3 Liability

The IHF as well as the service provider of the IHF shall be only liable for any damages resulting from unlawful intent or gross negligence in performing their contractual obligations. The IHF shall not be liable for any damage that might result from a delay in communication between the IHF and the Ball Manufacturer. Furthermore, the IHF shall not be liable for any damage caused by the service provider assigned by the IHF to conduct the testing of the balls. Any further liability is excluded to the maximum extent permitted by the law applicable to this contract.

§ 4 Specification of ball types

The rights listed under § 1 shall be granted only to the following ball types:

.....

Should the Ball Manufacturer require the rights listed under § 1 for further products, an additional contract shall be necessary.

§ 5 Licence fee

According to a decision of the IHF Executive Committee the annual licence fee has been set at

CHF..... (Swiss francs)

for one year.

The licence fee is payable upon the contract's conclusion and shall be paid into the following IHF bank account:

Bank: Bank CIC (Schweiz) AG, 4001 Basel

IBAN CHF: CH15 0871 0043 4600 5200 1

IBAN EUR: CH85 0871 0043 4600 5200 2

IBAN USD: CH58 0871 0043 4600 5200 3

SIC / Clearing number: 08710

SWIFT-BIC: CIALCHBB

Account holder: International Handball Federation

On payment of the licence fee following the approval of the IHF and the service provider of the IHF, the Ball Manufacturer gains the right to affix the official IHF seal of approval to balls of the tested and approved type(s).

§ 6 Duration of contract

This contract shall be valid for one year starting from the signing of the contract.

The contract shall be renewed upon request of the Ball Manufacturer and after IHF's approval. Any renewal shall be subject to a new contract between the Ball Manufacturer and the IHF.

§ 7 IHF's duty to provide information

The IHF shall display all balls mentioned in this contract in the section reserved for IHF seals of approval on the [IHF official website's marketing page](#).

§ 8 Termination of contract

The IHF shall have the possibility to terminate the contract if the Ball Manufacturer refers to the test report of the service provider of the IHF without complying with the applicable terms mentioned in § 1 and fails to correct this erroneous reference within 20 days after the IHF's notification.

The IHF shall have the possibility to terminate the contract, with immediate effect, in case the Ball Manufacturer misuses the IHF logo and/or uses the logo for other balls (different size, quality, and name etc.) than the approved one(s) and/or culpably breaches its obligations under this contract.

The IHF shall have the possibility to terminate the contract, with immediate effect, in case the Ball Manufacturer's reputation is in a way significantly and publicly damaged, giving the IHF comprehensible reason to believe that this may threaten its reputation as well.

§ 9 Language

Since English is the IHF's first official language, contracts are only composed and interpreted in English.

§ 10 Miscellaneous

The Ball Manufacturer may not assign or transfer this contract nor any rights or obligations hereunder without the prior written consent of the IHF.

This contract constitutes the entire agreement between the Ball Manufacturer and the IHF concerning the subject matter hereof. There do not exist any written or verbal amendments.

Any alterations of this contract are void unless they are made in writing and signed by the IHF and the Ball Manufacturer. This also applies to an agreement to waive this requirement.

§ 11 Place of jurisdiction

According to Article 1.6 of the IHF Statutes, the IHF shall be subject to Swiss law. Therefore, this contract shall be governed and interpreted by Swiss law. The place of jurisdiction shall be Basle, Switzerland, where the IHF Head Office is located.

In case of any disputes arising out of or in connection with this contract, the parties shall exert their best efforts and strive for an amicable settlement. If no such amicable settlement can be achieved, any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration under the Procedural Rules of the IHCA Code. These Rules are deemed to be incorporated by reference into this clause. The IHCA shall act as an ordinary court of arbitration.

This contract shall be drawn up in duplicate.

This contract shall come into effect immediately upon signing by the two parties.

Place and date

INTERNATIONAL HANDBALL FEDERATION

Signature

Name

Function

Ball Manufacturer

Signature

Name

Function



Appendix 3

IHF Handball Requirements and Test Methods

1. General Principles

The IHF Handball Requirements and Test Methods define the requirements and test methods for handballs to be provided with the IHF seal of approval.

There are two categories of IHF approval:

IHF APPROVED PRO: for all official IHF matches as well as other international and elite level national matches.

IHF APPROVED: for all elite level national matches.

2. Test Requirements

The following table indicates the requirements that must be met for a handball to be eligible for certification:

Inspection Item	Handball with RESIN		Handball without RESIN	
	APPROVED PRO	APPROVED	APPROVED PRO	APPROVED
Circumference	size3 : 58-60cm size2 : 54-56cm size1 : 50-52cm	size3 : 58-60cm size2 : 54-56cm size1 : 50-52cm	size3 : 55.5-57.5cm size2 : 51.5-53.5cm size1 : 49-51cm	size3 : 55.5-57.5cm size2 : 51.5-53.5cm size1 : 49-51cm
Weight	size3 : 425-475g size2 : 325-375g size1 : 290-330g	size3 : 425-475g size2 : 325-375g size1 : 290-330g	size3 : 400-425g size2 : 300-325g size1 : 290-315g	size3 : 400-425g size2 : 300-325g size1 : 290-315g
Rebound Height	90-110 cm	90-110 cm	90-110 cm	90-110 cm
Sphericity	less than 2.5%	-	less than 2.5%	-
Size Retention	less than 1%	less than 2%	less than 1%	less than 2%
Shape Retention	less than 2.5%	-	less than 2.5%	-
Ball Grip	playable in dry condition	playable in dry condition	Playable both in dry and wet condition	Playable both in dry and wet condition

3. Test Methods

3.1. Test Conditions

The ambient conditions during testing shall be room temperature of 20 ± 2 °C, relative humidity of $65 \pm 5\%$ and atmospheric pressure of 860 to 1,060 hPa.

3.2. Testing Ball Pressure

The handballs are inflated with compressed air to the mean value of the range indicated by the manufacturer and clearly printed on the ball, i.e. manufacturer stated range is 0.10 to 0.20 bar, inflation pressure is 0.15 bar.

- The range of the inflation pressure indicated by the manufacturer shall be clearly printed on the ball.
- The difference between minimum and maximum inflation pressure indicated by the manufacturer shall be 0.10 bar or less.

3.3. Conditioning

The handballs are inflated to a testing pressure as per 3.2. After conditioning at 20 ± 2 °C and $65 \pm 5\%$ RH for at least 24h, the pressure is measured again and if necessary adjusted to testing pressure.

3.4. Circumference

After conditioning, the radius is measured by the CSM machine. Circumference is calculated automatically.

Test apparatus	CSM machine
Number of points measured	4,500 (45 cycles 100 radii each)
Number of handballs tested	3 per type

3.5. Weight

After conditioning, the weight is measured by an electronic scale with an accuracy of 0.01g.

Number of handballs tested	3 per type
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3.6. Rebound Height

After conditioning, the rebound height is measured from the rebound surface to the bottom of the handball when dropped from a height of 200 cm, measured to the bottom of the ball.

Empa Test:

A conditioned handball is dropped in a guided free fall with a defined velocity onto a plane steel surface. With the help of a video camera, the height of rebound, at the lower side of the ball, is determined. The parallax error caused by the difference in the height of rebound and the camera height will be taken into account in the final results.

End velocity	6.25 ± 0.15 m/s (corresponds to a falling height of 2 m)
Number of samples	3 per type

3.7. Sphericity

After conditioning, the radius is measured by the CSM machine. Sphericity is calculated automatically.

Test apparatus	CSM machine
Number of points measured	4,500 (45 cycles 100 radii each)
Number of handballs tested	3 per type

3.8. Shape and Size Retention

The handballs are inflated to a defined pressure and shot against a steel plate with a fixed angle at a defined velocity. After a defined number of shots, the sphericity and increase in circumference are determined, and any damage to seams or valve is noted.

Test apparatus	special test apparatus (Empa)
Number of handballs tested	3 per type
Number of shots	1,000 for each handball
Shot velocity	approx. 50 km/h

3.9. Ball Grip

The grip of the handball is tested and evaluated by male and female players. This player test is arranged by the IHF Technical Committee.

Number of handballs tested	3 per type
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*A scientific test method to measure the ball grip is currently being reviewed by Empa. If developed successfully, it may be added to the laboratory test items.