

## **BWF EQUIPMENT CERTIFICATION PROGRAMME**

### **SHUTTLECOCK**

#### **INTRODUCTION**

This scheme was introduced in 1988 and focuses on whether equipment complies with:

- The relevant Laws of Badminton;
- Whether there are any likely safety hazards caused by the design and technical properties.

#### **CERTIFICATION PERIOD**

Shuttlecock testing is conducted two times each year in May and November. The certification period runs for **one year** beginning from the certification date. BWF reserves the right to withdraw BWF certification at any time.

The certification process may take 2 months to complete. No temporary certificate requests or immediate approval requests will be entertained.

#### **APPROVAL ENTITLEMENTS**

The results of all tests are examined by the BWF and, if approval is granted, the manufacturer will be entitled to include the approval statement "**Approved by the BWF for international play**" on the packaging for that certified brand and grade. All certified companies and their products are listed on the BWF website.

It is **NOT** permitted to use the BWF logo on packaging and/or advertising.

**HOW TO OBTAIN BWF EQUIPMENT CERTIFICATE**

1. **Documents** – Send to the BWF the following documents:
  - a. Application form for each brand/grade/model of shuttlecock that you wish to present for testing. The product name **MUST** correspond to the name on the product packaging.
2. **Shuttlecock Samples** - Send three (3) tubes of the feather shuttlecocks - speed 79 OR equivalent - (for each brand) to the BWF Secretariat address:

**BADMINTON WORLD FEDERATION  
UNIT NO. 1, LEVEL 29  
NAZA TOWER PLATINUM PARK  
NO. 10, PERSIARAN KLCC  
50088 KUALA LUMPUR, MALAYSIA.  
ATTENTION: THEVAGI SUPPIAH**

Please note the shuttlecock testing periods are in May and November. **As such all sample shuttles must reach BWF Secretariat address by April and October.**

3. **Invoicing** – We will send you an invoice for the testing fee for a 12-month approval or re-approval for each new brand and/or model to be tested and, upon receipt of the payment; we will forward your shuttles for testing. When making a bank transfer, please include a reference which states your company/brand name/model followed by the wording “shuttlecock testing” and, where appropriate, the invoice number. Please email a copy of your bank transfer advice note to the BWF for the attention of Thevagi at [t.suppiah@bwfbadminton.org](mailto:t.suppiah@bwfbadminton.org)
4. **Testing** – BWF Accredited laboratory will undertake the shuttlecock test and prepare a BWF Shuttlecock Test Report. These tests cover compliance with BWF laws of badminton, trajectory, flight deviation, tumbling stability and base surface roughness. The shuttles are tested by BWF Appointed Laboratory and international players.

5. **Issue of Certificate** – The BWF Equipment Certificate will be issued upon receipt of payment.

#### **HOW TO OBTAIN RENEWAL OF CERTIFICATE**

1. Prior to the expiry of the approval period please submit the Application to obtain a new approval of the shuttlecocks. Please note the shuttlecock testing periods are in May and November. All sample shuttles must reach BWF Secretariat address by April and October.

#### **FEES**

**New Approval** - The Approval Fee of USD 3,000 for each brand/model/grade of shuttlecock. If the shuttlecock fails the test, USD 2,000 is refundable.

**Renewals** - The Approval Fee of USD 2,000 for each brand/model/grade of shuttle. If the shuttle fails the test, USD 1,000 is refundable.

#### **REQUIREMENTS FOR APPROVAL**

Please refer to below regulations and charts regarding Certification Standards.

Please note that BWF will also make random tests of market samples in the following way:

- BWF will randomly over the year source samples from tournaments of some brands, such samples to be tested in BWF lab and if the shuttles fail the test, the approved will be withdrawn.

- If any changes to the components, method of construction, nature or quality of the shuttle differ from the test report, and/or without BWF prior written consent it will result in approval being automatically withdrawn.

## **LAWS OF BADMINTON**

### **2. SHUTTLE**

- 2.1 The shuttle may be made from natural and/or synthetic materials. From whatever material the shuttle is made, the flight characteristics generally should be similar to those produced by a natural feathered shuttle with a cork base covered by a thin layer of leather.
- 2.2 The shuttle shall have 16 feathers fixed in the base.
- 2.3 The feathers shall be measured from the tip to the top of the base and each shuttle shall be of the same length. This length can be between 62 mm and 70 mm.
- 2.4 The tips of the feathers shall lie on a circle with a diameter from 58 mm to 68 mm.
- 2.5 The feathers shall be fastened firmly with thread or other suitable material.
- 2.6 The base shall be 25 mm to 28 mm in diameter and rounded on the bottom.
- 2.7 The shuttle shall weigh from 4.74 to 5.50 grams.
- 2.8 Non-Feathered Shuttle
  - 2.8.1 The skirt, or simulation of feathers in synthetic materials, replaces natural feathers.
  - 2.8.2 The base is described in Law 2.6.
  - 2.8.3 Measurements and weight shall be as in Laws 2.3, 2.4 and 2.7. However, because of the difference in the specific gravity and other properties of synthetic materials in comparison with feathers, a variation of up to 10 per cent is acceptable.

**3. TESTING A SHUTTLE FOR SPEED**

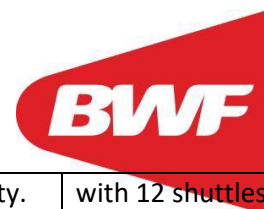
- 3.1 To test a shuttle, use a full underhand stroke which makes contact with the shuttle over the back boundary line. The shuttle shall be hit at an upward angle and in a direction parallel to the side lines.
- 3.2 A shuttle of correct speed will land not less than 530mm and not more than 990mm short of the other back boundary line.



**APPROVING BADMINTON SHUTTLECOCKS**

Requirements apply for both shuttles sent to BWF for approval and shuttles sampled at BWF tournaments. Brands that fail test after sampling at BWF tournament will have the approval withdrawn.

CRITERIA	MEASUREMENT	TEST DEFINITION	MEANS OF TESTING	MINIMUM REQUIREMENTS	TYPE OF REQUIREMENTS	BWF APPROVED
1.	<b>Specified in BWF Statutes</b>	Fulfill all requirements in <b>BWF Statutes</b>	Monitoring and weighing	See statutes	Needed for approval	Fulfill all
2.	<b>Flight (tested with normal shuttlecock speed test method)</b>					
a.	Flight distance variance, cm	Speed (distance of flight). Difference between shuttles in a tube, tested in accordance with statutes.	Manuel hitting by international player	Difference between all 12 shuttles is	Needed for approval	< 25 cm
b.	Stability Quality, A, B, C & D	Stable flight (wobbling). Flight graded into A (straight), B (little wobbling), C (wobbling) and D (big wobbling - not	Manuel hitting by international player and monitoring of	Only quality A (no visible wobbling) and B (very little wobbling) shuttles in one tube	Needed for approval	Class A, maximum 1 shuttle class



		playable in Int. Tournaments).	flight stability.	with 12 shuttles.		B
c.	Flight deviation and flight deviation variance	Deviation to the right/left due to the rotation of the shuttle and angle of attack.	Manuel hitting by international player	Maximum variance 15 cm for all 12 shuttles	Needed for approval	< 15 cm variance
d.	Trajectory and trajectory variance	Trajectory. Maximum variance in trajectory compared with shuttle used at World Championships (Reference)	Manuel hitting and high speed video recording	Reference is classified as 3. A parachute type trajectory is classified as 1 and a flat trajectory 5.	Not mandatory, Quality parameter recommended	Class 3
e.	Tumbling stability	Stability when tumbled at the net. A test in the launching machine	Shuttle launching machine, high speed video recording	Flight distance before turning 180 degrees. Classified 1-5.	Not mandatory, Quality parameter recommended	Class 3
3.	<b>Smash resistance</b>	<b>Durability - smash test.</b> Three shuttles used for test. High lifts-vertical fall, 10 smash strokes/shuttle				
a.	Decrease in diameter	Decrease in diameter monitored 15 seconds after	The smasher is an	Maximum decreased diameter should be	Needed for approval	10 smashes, < 10 %

**BADMINTON WORLD FEDERATION**



		last hit.	international male player	less than 10%, monitored 15 seconds after last hit.		deformation
b.	Feather breakage	Feather breakage in smash test after 10 smashes	The smasher is an international male player	No broken feathers on any of the shuttles	Needed for approval	None broken