

**British Softball Federation**  
**Bats Approved for use at tournament play in the UK.**  
**Recommendation**

Earlier on this year the BSF adopted the ESF policy on bats which stated that all bats must have both an ISF and an ASA 2000 or 2004 kitemark on them, apart from Anderson bats and all wooden bats, and must not appear on the ASA non approved bat list.

This led to a lot of confusion and annoyance from players as it removed many bats from the game that were previously allowed. We subsequently decided to follow the ASA approved bats as long as they did not appear on the non approved bat list.

We have to decide on a policy that is safe for the players and easy to police for umpires and Tournament Organisers.

Although we follow the ISF rules of play, traditionally we have used the ASA bat approval system. The ISF also have a bat testing programme which approves bats for international competition. Having looked extensively at the bat testing procedures for both the ISF and the ASA, I should like to point out that the ISF approved bat list as of September 2009 lists approximately 560 bats. The ASA approved list contains some 930 bats. By cross checking the ISF approved list against the ASA non approved list (which contains 24 bats that have an ASA certification mark but have subsequently been non-approved by the ASA), - 15 of them are approved by the ISF.

This brings us to the question of which testing procedure we wish to follow.

It is fairly difficult to find much information about ISF testing, however, the ASA are quite happy to release reams of information on their bat testing programme.

The Amateur Softball Association began regulating the performance of slowpitch softball bats in 2000. At that time the industry standard for testing the performance of softball bats was to follow the test protocol outlined in ASTM Test Standard F1890. Note that while this test protocol bears the phrase "bat performance factor" in its title, the ASA has never used the BPF performance standard, but instead has always used a Batted-Ball Speed standard. They just followed the test protocol outlined in ASTM F1890 to determine a value for BBS. The version of the test standard in use at the time ASA began regulating bats is designated F1890-98. This version of the test standard made the following assumptions:

- typical pitched-ball speeds for the game of slowpitch softball are around 10-mph.
- typical bat-swing speeds for adult slowpitch players are around 60-mph, with some top level players capable of reaching 70-mph swing speeds.
- impacts at the centre of percussion of the bat offer the highest batted-ball speeds due to the optimization of momentum transfer.
- the pivot point of the bat while being swung is on the handle approximately 6-inches from the knob end.

The ASA made a policy decision to limit the Batted-Ball Speed to 125 feet/second (85 mph), and any bat which produced BBS of 85-mph or lower was certified as passing the ASA-2000 BBS standard, and legal for play.

During the 2002 ASA National Tournament in Montgomery, USA, an extensive field study of bat swing speed and bat performance was conducted. The data from this field study, along with other concurrent laboratory studies revealed that all of the assumptions made in the F1890-98 test standard were incorrect.

- Actual pitched-ball speeds for the game of slowpitch softball were found to be around 25-mph (not 10-mph).
- Actual bat-swing speeds for top A-level slowpitch players were found to be around 89-mph (not 70-mph) with D-level players swing bats at 81-mph (not 60-mph). Furthermore, bat-swing speed depends strongly on the moment-of-inertia of the bat rather than on the bat weight.
- The Centre-of-Percussion (COP) was found not to coincide with the location on the bat barrel where Batted-Ball Speed is highest. Instead, the location of maximum BBS tends to vary from bat to bat.
- The pivot point of the bat was found to change during the swing, with the location at the moment of impact being approximately at the wrist of the lower hand of the batter.

Based on the data from this "era" study, the ASA chose to set the maximum BBS value, effective January 2004, to be 98-mph. A bat must produce a BBS of 98-mph or lower to be certified by the ASA and bear the ASA2004 stamp on the barrel. Even though the numerical value of the BBS with the new standard is higher than with the older standard (98-mph compared to 85-mph), the new standard is actually much stricter. Many bats which passed the old 85-mph BBS standard using F1890 no longer passed the new 98-mph standard using F2219.

### Recommendation

Based on the above information, I would recommend that the BSF adopts the ASA approved/non approved bat list.

1. It is very simple for players and officials to check bats for ASA certification marks and with a list of only 24 non approved bats with certification marks, the process should be very simple to police.
2. It is of course always a possibility that further bats will be added to the non approved list by the ASA.
3. All bats therefore must bear the ASA 2000 or 2004 certification mark **AND** not appear on the ASA non approved bat list with certification marks.
4. It is up to individual leagues whether they follow this ruling or not, however, to avoid confusion amongst players at tournaments, we strongly suggest that all softball clubs/associations in the UK follow this ruling.

I have been asked whether fastpitch bats can be used in slowpitch play, the answer is yes. However, fastpitch softball bats are generally lighter than slowpitch softball bats, because the higher speed of the pitched ball means that the batter has less time to decide to commit to swing and must be able to swing the bat faster. Using a fastpitch ball in a slowpitch softball game would probably result in damage to your fastpitch bat. You could use a slowpitch bat in a fastpitch softball game without damaging it but the larger weight (actually, larger moment-of-inertia) makes the slowpitch bat more difficult to swing quickly and you would probably not hit as well.

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