**INFORMATION REGARDING BASEBALL BATS**

Before I talk specifically about the rules regarding baseball bats, let me first summarize and review what all of the terms mean and give you a little background.

There are three commonly used performance metrics used to regulate baseball and softball bats. Batted Ball Speed is the ultimate is the ultimate performance metric. There is a lot of physics involved, which is not important for our purposes.

Method 1 is to regulate the Batted Ball Speed directly, thus you have probably heard of the ASA BBS standard.

Method 2 is to regulate the Batted Ball Speed indirectly by regulating the collision efficiency and attempting to limit bat speed by regulating the moment of inertia of the bat. This is what the Ball Exit Speed Ratio (BESR) standard does.

Method 3 is to ignore bat swing speed and regulate the collision efficiency indirectly by regulating a related quantity, the Bat Ball Coefficient of Restitution and then dividing out the coefficient of restitution to produce a “Bat Performance Factor.” The BPF represents the elastic properties of the bat alone. Most bats manufactured over the past several years have been imprinted with the BPF.

A BPF of 1.15 means that the bat will perform at a rate of 115% to a similar-sized wooden bat.

All non-wood bats must now meet the Batted Ball Coefficient of Restitution (BBCOR) performance factor. These changes are all about safety and to help assure that the performance of non-wood bats are more aligned with the performance of wooden bats.

Previously, the bats on the market used the Ball Exit Speed Ratio (BESR) standard. The

BESR measures the speed of the ball after it has been hit with the bat. Under the BESR standard the ball cannot leave the bat at a speed of more than 97 mph when it is new.

Once these bats get broken in, we have found that the ball leaves the bat at speeds up to 115 mph, particularly with composite barrel bats. I believe that all NFHS and NCAA leagues have already banned composite barrel bats because of this. Clearly, the concern here is for safety.

We were seeing an increase in injury to 1st and 3rd basemen and pitchers due to the high exit speeds of the ball off of some of these bats, because they cannot react quickly enough. Under the BESR standard, balls could reach the pitcher in less than .375 seconds.

The new standard, the BBCOR (Batted Ball Coefficient of Restitution) measures the trampoline effect of the bat. You can think of it as “bounciness” of the ball and the bat.

You can think of it like this: If you jump up and down on the hard floor, it takes a lot of energy for you to get some air under your feet. The floor doesn’t give you any help. If you contrast this with jumping up and down on a trampoline, it takes very little energy for you to get up into the air because the trampoline is not absorbing the energy. The BESR certified bats are giving you a lot more bounce. The new BBCOR certified bats will not give you that trampoline effect. The ball is not going to travel like they did with the BESR bats.

It may still be cost effective to buy non-wood bats because they are going to last longer than wooden bats, but they are not going to perform any better than wooden bats.

**GUIDE TO BATS UNDER PONY BASEBALL**

**RULES**

**PART A**

**A-1.** Is the bat 42 inches or less in length? If no, the bat is not allowed for use in Pony Baseball. If yes, continue to No. A-2.

**A-2.** Is the bat more than two and five-eighths inches in diameter at the thickest part ?

If yes, the bat is not allowed for use in Pony Baseball. If no, continue to Part B.

**PART B**

**B-1.** Is this a 2-1/4 inch barrel non-wood bat? If no, go to Part C. If yes, continue with question B-2

**B-2.** Was the bat manufactured before January 2012? If yes, go to question B-3. If no, go to questions B-4.

**B-3.** Is the bat stamped with a Bat Performance Factor (BPF) of 1.15 or less? If no, the bat is not allowed for use in Pony Baseball. If yes, the bat is certified for use in Pony Baseball.

**B-4.** Is the bat stamped “approved for play in PONY Baseball,” and stamped with “BPF

1.15” and the year manufactured? If no, the bat is not allowed for use in Pony Baseball.

If yes, the bat is certified for use in Pony Baseball.

**PART C**

**C-1.** Is the bat a minus three (-3) bat? If yes, go to Question C-2. If no, the bat is certified for use in Pony Baseball.

**C-2.** Is the bat a “smooth implement?” (no dents or gouges) If no, the bat is not allowed for use in Pony Baseball. If yes, continue to question C-3.

**C-3.** Is the bat made of wood? If no, continue to question C-4. If yes, the bat is allowed for use in Pony Baseball.

**C-4.** Is the bat labeled as BBCOR approved with a length-to-weight difference of 0.50 or less? If no, the bat is not allowed for use in Pony Baseball. If yes, the bat is approved for use in Pony Baseball.

**FREQUENTLY ASKED QUESTIONS**

**Question:** What does minus 3 or drop 3 bat mean?

**Answer:** This refers to the length to weight ratio of the bat. If the length of a bat is 34 inches and it is a minus 5 (-5) or “drop 5” bat, then the weight of the bat is 29 ounces.

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**Question:** What is BPF?

**Answer:** BPF stands for Bat Performance Factor. BPF represents the elastic properties of the bat. A BPF of 1.15 indicates that the bat will perform at a rate of 115% to a similarly sized wooden bat.

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**Question:** What is BBCOR?

**Answer:** BBCOR is the Bat Ball Coefficient of Restitution. In short, the BBCOR measures the “trampoline effect” of the ball and the bat. Think of it as the “bounciness” of the ball and the bat. The BBCOR standard ignores bat swing speed and regulates the collision efficiency of the bat indirectly. If you divide the coefficient of restitution out of the BBCOR, this produces the BPF, which represents the elastic properties of the bat alone.

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**Question:** Why did Pony Baseball implement these rule changes?

**Answer:** The rule changes are born out of safety concerns. As technology has progressed, bat performance has increased. While there is always an inherent risk of injury in any athletic endeavor, the goal is to decrease the risk of injury due to increased exit speeds of a batted ball as it leaves the bat. Under the old standards, know as Ball Exit Speed Ratio (BESR), a batted ball could reach the pitcher is less than .375 seconds.

Under the new standards, 1st and 3rd basemen and pitchers have more reaction time to a batted ball. The new standards help assure that the performance of non-wood bats are more aligned with the performance of wooden bats.

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**Question**: What is a composite bat and are composite bats allowed in Pony

Baseball?

**Answer:** A composite bat has an aluminum exterior with a woven graphite core on the inside. As long as the composite bat meets the length, diameter and BBCOR or BPF requirements listed in the rules, composite bats are allowed in Pony Baseball.

**Determine Your Bat Length**

There are some standard rules of thumb in selecting the appropriate bat length. The charts below offer some guidelines based on age, weight and height:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Bat Length by Age** | | | | | | | |
| Age | 5-7 | 8-9 | 10 | 11-12 | 13-14 | 15-16 | 17+ |
| Bat Length (in) | 24-26 | 26-28 | 28-29 | 30-31 | 31-32 | 32-33 | 34 |

Use the age guideline as a starting point, but height and weight are usually better ways to determine your ideal bat length:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Determine Your Bat Length by Weight and Height** | | | | | | | | | | |
|  | **Your height (inches)** | | | | | | | | | |
| **Your weight (pounds)** | 36-40 | 41-44 | 45-48 | 49-52 | 53-56 | 57-60 | 61-64 | 65-68 | 69-72 | 73+ |
| **Bat length** | | | | | | | | | |
| less than 60 | 26" | 27" | 28" | 29" | 29" |  |  |  |  |  |
| 61-70 | 27" | 27" | 28" | 29" | 30" | 30" |  |  |  |  |
| 71-80 |  | 28" | 28" | 29" | 30" | 30" | 31" |  |  |  |
| 81-90 |  | 28" | 29" | 29" | 30" | 30" | 31" | 32" |  |  |
| 91-100 |  | 28" | 29" | 30" | 30" | 31" | 31" | 32" |  |  |
| 101-110 |  | 29" | 29" | 30" | 30" | 31" | 31" | 32" |  |  |
| 111-120 |  | 29" | 29" | 30" | 30" | 31" | 31" | 32" |  |  |
| 121-130 |  | 29" | 29" | 30" | 30" | 31" | 32" | 33" | 33" |  |
| 131-140 |  | 29" | 30" | 30" | 31" | 31" | 32" | 33" | 33" |  |
| 141-150 |  |  | 30" | 30" | 31" | 31" | 32" | 33" | 33" |  |
| 151-160 |  |  | 30" | 31" | 31" | 32" | 32" | 33" | 33" | 33" |
| 161-170 |  |  |  | 31" | 31" | 32" | 32" | 33" | 33" | 34" |
| 171-180 |  |  |  |  |  | 32" | 33" | 33" | 34" | 34" |
| 180+ |  |  |  |  |  |  | 33" | 33" | 34" | 34" |