Ball Compression vs. COR ratings
By Craig Opal

I will try here to simplify a complex issue. We all know about the hype surrounding bats and their bannings etc., but what about balls? It's probably more confusion rather than hype.

First what's more important ball core or compression?
Answer: both they just do different things. COR is simply the rate at which a ball will reflect back after being cast against an immovable object. So the higher the core the higher the reflectivity or the higher the bounce if you will. Core 52 has a higher bounce than a core 40, but core is only part of the picture, although if you could choose a core 52 with low compression like 275lbs. (which would be the ultimate mush ball but very lively) this would be a good ball for a stiff walled bat like a the new ASA only Combat for example and I do have a full and detailed bat review on the New Combat Softball bats which you must see.

Unfortunately older low compression balls (375lbs.) are many times paired up with core 40 or 44 making the ball much less lively. This is why it is important to separate the two. The compression works like this: 275lb. comp balls are softer or "compress" more and easier than a 525 lb. ball which is hard like a rock. It takes 525lbs. of pressure per square inch to compress a 525lb. ball 1/4". It takes only 275lbs. of pressure to compress a 275lb. ball 1/4". So the higher the compression the harder the ball and the harder the ball, the farther it will fly *with the right bat*. What is the right bat for these two scenarios? Well lets look at a bit closer.

If you could choose and I know many times you can't unless it's your own practice, but if you could the ultimate ball for lets say a Miken Ultra or another high flex bat it would be high comp. 525lb.ball with 52 COR. Most times though 525's are paired up with 47 COR and most people think its the core only that is allowing the ball to fly farther, but it is in fact both the compression and the core.

Now lets look at a low compression ball like 275lbs. and a bat with a lot of flex(ultra, rocket tech, synergy, pst, etc.). Typically a low compression ball and a bat with a lot of flex is not a good combo especially over time(time being the more the ball is hit the mushier it gets). A better pairing is those above named bats and a hi comp 525lb. ball. Hard ball meets 'soft' bat = long hit. Simple.

So what would a better bat be for the low comp 275lb. or 300lbs. with core 50 and 52 balls? Something that doesn't flex as much and guess what, this is how the world record of 510 feet was broken back in the 70's. A 'hard' bat (no flex) was used with what kind of ball?

Answer: Back in the 70's the balls flexed incredibly and were made of a type of

'Surilyn'. The flex on the ball was incredible and rivaled what a superball is, or these new 52 core 275lb. compression balls of today. So the leagues are going to this ball because it's safer if you get hit, however it still performs very well and may even outperform a Miken Ultra and a hard ball.

So now we as players, should find out what comp balls are being used in our leagues and tournaments so we can match a better bat to the ball we are using.

The following should help you in understanding the ball compression and how it relates to certain bats. I have broken it down to what I hope is an easier to understand format, because I know it can be confusing.

275lbs low compression = more flexible or 'mushy' does not perform well with high flex bats, but performs very well with stiff walled bats ie: Combat Derby boys ASA orange bat and 275 red bat.
400lb-475lbs. mid compression = medium flexibility still performs OK with most bats, but not great with either.
525lb. compression= harder ball-performs well with almost any bat on the market, especially juiced or high flex models etc., but not with the newer stiff walled bats.

Core 52= more flexible bouncy or 'mushy'
Core 44= medium flexibility
Core 40= less flexible

So as you can see here if you were to have a core 40 with a low compression ball you still will have poor performance with most bats, which I have found to be true in my own testing as well. But as soon as you pair up low compression with core 47 or 52 now you have much more loss in performance with the high flex bats and why I now recommend the Combat Derby boys 275 or ASA only bat with those balls. Anything mid compression and above will perform well with high flex bats and juiced bats, which by the way will soon be going away.

Also Endloaded bats will in all instances make any ball fly farther, and outside temperature and the climate you may play in will also effect performance. Cooler temps will keep the ball harder and flying farther with high flex bats. Warmer temps will keep the ball more flexible and mushier.

Also bat weight also factors into hitting a ball for distance. The heavier the bat and the heavier the endload you can swing the better for distance, even and or especially on the mush balls. This is also proven with the players who hit 14" & 16" balls. If you have ever hit a 16" softball you know it is very soft and flexible to where you don't even need fielding gloves to catch it. Using a Miken Ultra with these balls is almost useless. Most players using these balls go with the heaviest stiff walled bats they can find.