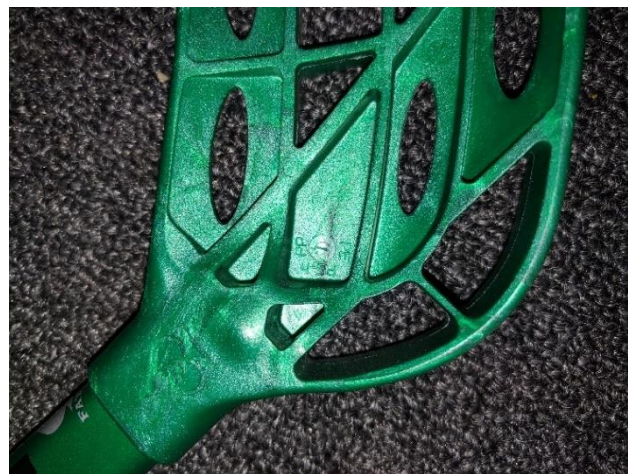
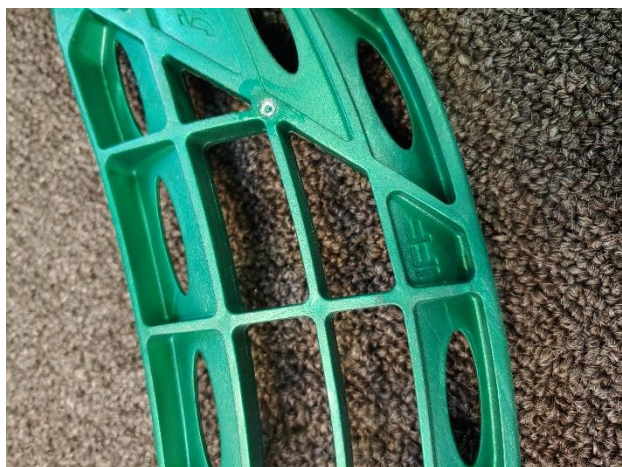


Anatomy of a Blade

by Dan Torretta – 5/8/20

While writing “Anatomy of a Stick” I realized just how much detail goes into the blade of a floorball stick. To prevent that article from being a dissertation I thought it would be best to give blades their own platform. First, a disclaimer. I’m not pushing anyone to buy a particular brand. There is more information on, for example, Fat Pipe than there is for Oxdog. That’s not to say that Fat Pipe is better, that’s for you to determine with the information given. I will also only be including the brands that FloorballPlanet carries. That includes Salming, Fat Pipe, Oxdog, and Exel. Those are the brands that I’m most familiar with, and I don’t want to go into detail about a brand that I don’t have hands-on experience with. You’ll also notice that I write “they claim” several times throughout. This is because I haven’t played with every blade enough to say definitively whether certain technologies work as intended.

If you look at your blade, you’ll notice there are some markings on it. The one guaranteed mark is the letters “IFF.” This of course means the blade is approved by IFF for use in all official competitions. If your blade doesn’t have this marking, you CANNOT use it during games, or you run the risk of being red carded. Depending on the brand of your stick, you might see a wheel with numbers, and a wheel with various initials (PP, PE, PE-h, etc.). The former is the month and year the blade was manufactured. This allows for quality control in case there is a recurring problem with blades breaking or whatever the problem may be. The companies can identify a lot of specific details from each batch, such as what mold was used and what the temperature was during the manufacturing process. The latter designation denotes the kind of plastic used in the blade.



The vast majority of blades are made from two types of plastic, polyethylene (PE), and polypropylene (PP). There are advantages and disadvantages to both. PE is a softer plastic than PP, so it has a lower melting point. There is also a higher density version of polyethylene, that I will refer to as PE-h, which is harder than PE, but not as hard as PP. PE blades are easier to bend. They can be manipulated to some degree by just your hands, no added heat. This can be advantageous during a game if your specific blade shape needs fine tuning before your shift starts. (I also see a lot of players check the blade and try to bend it after they miss the net by about 20 feet). Playing surface matters as well. Yes, there is a difference in the plastic, but the same blade will feel different on wood than it does on Gerflor (the official playing surface in the World Championship).

If you get a new blade with the intention of adding a custom hook, I recommend getting the PE version (if available). The blade will need to be heated to about 95°C (203°F). I use a heat gun to get the desired temperature, but sometimes even a hair dryer will suffice. **When heating a blade, I always recommend wearing gloves.** Be aware that the blade will start to melt around 110°C (230°F). To get the blade to hold its new shape, you’ll need to immediately submerge it in ice water. This might need to be done more than once because blades usually try to revert to their original shape. If you have a PP blade, I don’t recommend trying to add a custom curve. You’d have to heat the blade up to around 150°C

(302°F), and the melting point is around 160°C (320°F), so you run the risk of overheating (and melting) very easily. Remember, the rule for maximum curve is that if you lay the blade on its face (forehand side down), the highest point can't be more than 3 cm from the surface. If it's more than 3 cm you'll be given a red card and ejected from the game.

Another way you can be ejected from a game is to use a blade of one manufacturer with the shaft of another manufacturer. For example, you can't use a Salming shaft with a Fat Pipe blade. The IFF claims this is a safety issue since sometimes the blade doesn't fit well with the shaft of a different brand. I think it's because the brands don't want to lose market share, so they worked with IFF to ensure that players must use both the shaft and blade of the same make. In my opinion, if you want to ensure that players use your brand you should make the best possible product, so they don't want to use anything else.

All the brands have their own twist on blades and the materials. Let's take a closer look at each one:

Fat Pipe uses four types of plastic for their blades: PE, PE-h, PP, and PPB (the B stands for Boost). The boost is a special formulation added to the mold to make the blade a bit stiffer than traditional PP material, and to cut down on the friction of the playing surface. I was told that you'll notice the biggest difference in friction if you play on a wooden floor. The PE-h blades are not only harder than regular PE, but also a touch heavier. This probably won't factor into your decision making, but it's worth noting. Fat Pipe is also known for their Factory Hook (FH) blades. This is a slight variation of their normal blades. FH 2 adds more overall curve from heel to toe, while FH 4 is straighter with a bit more toe hook and slight downward curve of the toe. FloorballPlanet does not sell the Factory Hook variants. The blades are easy enough to curve yourself if you desire.

Salming has different terminology for their blade materials. They have Endurance, Touch, Touch Plus, and Biopower. Endurance is the equivalent of PE, and Biopower is a stiffer blade that is made from sugar cane. From the tag on the Biopower blade "the minimum biobased content of this grade is 96%." Based on the feel of this blade I'd say it's similar to PP material. The Touch is defined by Salming as "a fusion plastic compound that contains 50% of the unique Salming Biopower™ material." They fail to say what the other 50% is, but I assume it's the Endurance material because of the softness of the blade. I couldn't find much info on the Touch Plus, but I assume it's similar to Fat Pipe's PPB in that it has less friction. I'll amend this article if I get more information on it in the future. Some of Salming's blades also use what they call Trident Technology which is three raised prongs near where the blade connects to the shaft. They claim this helps energy transfer to the blade from the shaft when you shoot.



Exel uses traditional PE and PP materials, but they label them as SB (soft blade) and MB (medium blade). Exel is a new brand to FloorballPlanet so I haven't had as much time to play around with them as I would have liked, but it is worthy of note that all of Exel's blades are the maximum size allowed by IFF. What this might mean is that if you normally use a 101cm stick you might want to try a 96cm if you use Exel because the blade gives the stick more height. It's also great for shooters because you get more blade behind the ball which (in theory) creates harder shots.

Oxdog calls their material NB, MB, NBC, and MBC. The "C" stands for carbon and is used to designate a small piece of carbon fiber placed in top of the blade to add stiffness on shots. The theory is that less power is lost by the blade

bending when you put flex in your stick. NB stands for “normal blade” and MB denotes “medium blade”. Oxdog is very private about their material, even going so far as to including the words “secret resin” when describing what their blades are made from. I personally like the way Oxdog blades feel despite not knowing anything about what they’re made of.



As much fun as it was to delve into the finer points of blades, when it comes down to it, I think that players sometimes overthink it. I’m a huge believer in using what you think is most comfortable, not stressing about the stiffness of one material over another. If you really don’t know which material is best for you then go with your favorite color and you won’t be disappointed. As always if you have any questions or comments feel free to email me at dan@floorballplanet.com.