

Danger zone

Baseball fans at risk and the materials that can protect them

BY JOHN KMITTA

Every baseball fan loves to catch a foul ball—unless that ball catches them off-guard. At the professional level, bulked-up power hitters repeatedly send foul balls into the stands, and the pitches they are fouling off are being hurled at speeds up to 100 mph, severely limiting the amount of time fans have to react. But foul balls and fan safety are under scrutiny at other playing levels as well.

The increased scrutiny regarding fan safety in baseball is the result of recent incidents in the National Hockey League (NHL), including the death of a 13-year-old fan that was hit in the head by a puck. That incident, and other cases of fans being struck by errant slapshots, resulted in the NHL mandating that all arenas place protective netting behind the goalies, and has caused fans of hockey and baseball to question their own safety during sporting events.

According to Patrick Courtney, senior director, media relations for Major League Baseball, the league doesn't have an official rule regarding backstop/protective netting. It is a club-by-club decision.

"A lot of it is because of the shape of the field and the ballpark," said Courtney. "There are no two ballparks that are the same, so the clubs make the decision on the amount of netting and the type and the length. So we don't have any official rules on that. Obviously, the safety of the fans is most important. The things that have come up in the NHL we have been asked about, but it's a club-by-club decision on that."

According to Jason Koch, manager of sales and marketing for West Coast Netting, a Kingman, AZ, developer and supplier of netting materials, it might take something as tragic as the death of a fan for Major League Baseball to mandate that parks have to extend protective netting further down the baselines. However, he added that baseball is different because ballparks already have some level of protection.

"In baseball, they already know it's a fact that they have to have [protective netting]," said Koch. "In hockey they never wanted to have it. It was only certain arenas that thought it would be a better idea to have it. Baseball already has it. Some colleges and high schools have extended nets to protect a street or another field along the outfield. Or if it's a complex with multiple fields, they might want to extend nets or put a lid on things to protect fans. But there hasn't been a real increase [in netting sales to baseball parks] that I have seen since the hockey incident."

"We haven't been approached by any Major League ballfields about extending the nets," said Dan Farrow, net design and sales representative for Seamar, a Seattle-based developer of netting materials. "We called a couple of parks that we had supplied nets to, and they didn't have any plans on extending the nets along the foul lines."

"What we've found is that more high schools, colleges, junior colleges and public ballfields are extending netting to protect against foul balls going into the stands and also the parking lot. There are a lot more backstops going up and most of our calls are from school districts. We do see a trend toward a lot more use of backstop netting in a lot more areas. We're getting a lot more calls for along the third and first baselines, dugout and over the top of fans."



Net design and materials

For those who do make the buying decisions and are concerned about improving fan safety, there are several materials available.

"There are primarily two types of materials that we use for backstops," said Farrow. "One is knotted nylon netting, and the other is knotless polyethylene netting. There are differences in each. The knotted nylon netting is cheaper. It does have knots in it, it absorbs water, and the black nylon will fade over time to a dingy gray. But it has a lot of strength."

According to Farrow, black netting is used because black reflects the least. The black polyethylene, as opposed to nylon, doesn't absorb water. The knotless has less wind resistance. It is also stronger, because the knots are a point of tension in netting. However, that isn't as big of a factor in backstops, because there is not a lot of strain being

put on the net. The biggest features of the black polyethylene are that it's easy to see through because there are no knots, it doesn't shrink or stretch as much as nylon, it doesn't change configuration in humid climates and it is lighter weight, which is an important feature with regard to the suspension of the netting. The other advantage to polyethylene is that it stays black much longer than nylon, because the dye on the polyethylene nets is permanently in fibers (the dye on nylon nets is external).

"Our most common net is either nylon or polyester," said Koch. "It's what we typically call a number 36 netting. It's a typical run-of-the-mill netting that is used for backstops, home run fence, protection along the sides, batting cages, etc. It's more popular because there are more high schools and colleges out there than there are pro teams or people who have the big bucks."

"The other net that we use is a Spectra net, which is usually reserved for high-end college teams, minor league ballparks and Major League Baseball parks. Nylon vs. polyester is pretty much a wash. Some people prefer one to the other, so we manufacture both. We've found the polyester doesn't stretch as much over time, so we're starting to switch over a lot of our products to polyester instead of nylon. We can get the same break strength, so it actually works out that it's a better material."

According to Koch, Spectra is a high-strength fiber made by Allied Signal (now part of Honeywell). There is also a product called Dyneema, which is essentially the same as Spectra, but Dyneema is manufactured by Toyobo, Co. Ltd., Japan. Spectra and Dyneema are strong fibers at a smaller twine diameter, which provide increased strength as well as increased fan visibility.

"Right now Spectra is the top of the game, but it comes down to a cost factor," said Koch. "You can use less expensive materials and you're still going to be able to sit behind a high school ball game and see what's going on. Some people are really fanatical about how big the twine is, but at the lower levels most people don't mind. It's a net they can replace every five to 10 years. Whereas at the Major League level, it is something they don't want to have to deal with very often and they can afford the expense."



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Farrow said that one drawback to Dyneema or Spectra is that the fibers are slick and the coatings could wear off over time, leaving a gray fiber that is more difficult to see past. However, Farrow added that more high-level stadiums are going with Spectra because of the safety factor.

How much netting is enough?

Once you decide upon a netting material, the next—and perhaps more difficult question to answer—is how far the protective netting should extend.

“We don’t make any recommendations regarding what the netting should cover or how far it should extend down the baselines,” said Farrow. “The reason we don’t make any recommendations is the same reason that parks will have to eventually extend the netting, and that is the litigious nature of our society. If I make a recommendation and say ‘this is how far you need to go’ and somebody gets hit five feet past that, guess who is named is in the lawsuit—me—because I made a professional recommendation.”

Koch also said that liability issues are the reason his company avoids making recommendations on how far the netting should extend.

“There isn’t a lot of information available,” said Koch. “It’s really up to the club and what they decide to do, and what the engineer or architect has decided would work best for them.”

According to Farrow, Seamar relies on the buyer to determine how much netting is needed. However, he does offer the following advice to those who are in the market to purchase protective netting: “We ask for exact dimensions and we make it to fit exactly. And they better have their posts in before they call me. That is one of the big mistakes—they go by the blueprints and then say ‘the posts are only off by 6 inches.’ But 6 inches in a 40-foot span is a lot. If the net is too big it makes a big sail when the wind blows, and if it’s too tight you will never get it to fit. When people call us, we get exact dimensions, inside post to inside post, and we find out how they will support it, whether there will be vertical cables on the end and how it will be attached at the bottom.”

Although netting manufacturers and suppliers typically don’t make recommendations regarding how far to extend the nets, there are sources that provide some overall recommendations that parks can use to determine heights for protective fencing and netting.

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John Kmitta is senior editor at SPORTSTURF magazine.



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