

Higher Bottom-Line Synthetic Turf Profits



Norris Legue, the “Guru of Glue®”, is a chemist and President of Synthetic Surfaces Inc. In about 1969, he invented the first urethane adhesive that was used successfully

to install synthetic turf athletic fields. His company’s new generation of NORDOT® Adhesives are used to install synthetic turf more often than any other adhesive. In this Q&A, Legue talks about adhesives.

Why does the synthetic turf business continue to grow?

It’s because natural grass has certain limitations that synthetic turf does not. For example, natural grass can’t withstand heavy and repeated foot traffic. Plus, it’s weather-sensitive in the sense that it becomes soggy and muddy with heavy rain; however, it needs a great deal of water to survive in arid desert-like regions, where the water supply is already limited. Although synthetic turf needs some maintenance, it’s not as much as natural grass, which needs mowing, fertilizer, and weed control. These are some reasons for the growth of the synthetic turf industry.

You mentioned the problems with natural grass. Doesn’t synthetic turf also have some?

We think that one problem is the use of amateur installers and the other is the use of cheap, low-quality adhesives in an effort save money.

What is the problem with amateur installers?

Everyone knows rookies need to learn from experience, while experienced professionals have already gone through the learning curve. A high-quality synthetic turf installation is not easy, so experienced installers are preferred.

Why is the adhesive so important? Aren’t most glues basically the same?

Nothing can be further from the truth. Solvent-free “fair weather only” adhesives for turf increase labor costs and lengthen installation time. Because time is money, the installer must be able to work under variable and adverse weather conditions. Some of the challenges adhesives must withstand during installation include: cold winter and hot desert-like conditions; unexpected rain and it must have enough “grab” (green strength) to avoid squeeze-out when pressed and to overcome turf curl, plus hold the turf in place if the wind blows during installation. After curing, the adhesive must be able to withstand weathering and aging over long periods. Few adhesives have both good handling properties during installation and long-term durability after aging and weathering.

What do some solvent-free “fair weather only” adhesives lack?

During installation, some foam through seams, especially when it’s humid. Others take “forever” to set-up under low humidity conditions, while others solidify and do not re-liquefy when they become cold during transportation or when standing outdoors. Some have little or no green strength (“grab”). Even if they stick after cure, a great deal of time and money is lost and wasted babysitting these adhesives due to their poor installation and handling properties. Additionally, after cure some deteriorate and fail after aging and weathering.



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With the above information in mind, what types of adhesives have installation problems and what type avoid these types of difficulties?

In my opinion, all solvent-free turf adhesives should be avoided because they are “fair weather only” adhesives. At the other end of the spectrum, there are several one-part, solvent-based, high green strength, moisture cured urethane adhesives that are excellent in variable weather. Initially they cost more, but they are worth it because of faster and better installations with less labor, plus proven long-term durability. Ultimately, they’re less costly than “fair weather only” solvent-free adhesives.