



High  
Green  
Strength

# HOW TO AVOID SYNTHETIC TURF SEAMING PROBLEMS



Glue on long, wide seaming tape



Gluing a red logo insert



Gluing lines



Gluing number inserts

Norris Legue is a chemist and President of Synthetic Surfaces Inc. ([www.nordot.com](http://www.nordot.com)) He invented the first urethane adhesive that was used successfully to install synthetic turf athletic fields. His company's new generation of high green strength NORDOT® Adhesives are used worldwide to install synthetic turf. His peers have dubbed him the "Guru of Glue™".



**A**n artificial turf installation is basically large rolls and/or several smaller pieces of turf joined together with an adhesive and/or by sewing to make one single piece that covers the entire surface. The joining process creates seams, which are historically the weakest link of a good synthetic turf installation. Seams result from side by side joining of turf rolls and/or are created by purposely cutting or shaving the turf, in order to insert game lines, hash marks, numbers, logos, different color turfs, etc.

**Q: Two methods of seaming are Gluing and Sewing. Which do you prefer?**

**A:** We prefer gluing because the seam stress, over wide adhesive coated tape, is spread over a much larger joined area than sewing. Sewing holds the turf edges together with thread and the spaces between the stitches are not bonded. Just one thread cut by vandals can eventually cause the entire seam to fail, whereas, with gluing the vandals must cut the entire seam to cause failure.

**Q: What adhesive properties are necessary for a high quality turf installation?**

**A:** The adhesive should have proven long-term exterior durability after cure and a high green strength during installation (before cure). Both properties are essential.

**Q: We understand "durability", but what is a "high green strength adhesive" and what is its importance for installing turf, as opposed to one without high green strength?**

**A:** High green strength adhesives have tack/grab/gripping properties during installation as opposed to most adhesives that are oily/slippery liquids, after application and before they cure. After cure, both types of adhesives are solid and tack-free.

**Q: Why are the tack/grab/gripping properties essential?**

**A:** High green strength adhesive overcomes the troublesome forces that plague turf during installation, such as "wind lift"; edge curl; creep; wrinkling; buoyancy from unexpected rain; expansion and/or contraction due to surface temperature changes from desert heat; freezing; sunlight; shadows; passing clouds; etc.

**Q: Why are oily/slippery adhesives often a problem?**

**A:** Low green strength adhesives, do not overcome the problems mentioned above. Additionally, when installing turf inserts such as: game lines, hash marks, numbers, logos and other turf inserts, installers suffer from turf curling, plus adhesive "squeeze out", "oozing" and/or "foaming" through seams, caused by hand pressure or when rolled and/or accidentally stepped on.

**Q: What types of adhesives have been used to install synthetic turf?**

**A:** Hot melts, two-part, liquid solvent-free urethanes, one-part and two component solvent based urethanes, epoxy and solvent-free silicone based adhesives.

**Q: Of the above type turf adhesives, which ones have high green strength?**

**A:** To my knowledge, because it's technically difficult to formulate for high green strength, the only ones are some one-part solvent based urethane adhesives. In spite of their higher price, that's probably why they outsell all of the other type adhesives for installing turf.