



**Pro-Techs
Surfacing, LLC**

Cold Weather Installations of Playground Safety Surfaces

We would like to provide some clarification on proper weather requirements to install safety surfaces, both early and late in the season as optimal conditions become fleeting. This document outlines considerations that need to be considered when planning an installation during these periods. It should be noted that this is not an exhaustive listing, and that other site-specific environmental factors may need to be considered based upon the various locations and unique situations. This can include but not limited to; the location of the area including rooftop applications, duration of sunlight hours, absence of direct sunlight, ambient day and nighttime temperatures, and any moisture or humidity present. It must further be noted that proper drainage is critical to the longevity of any safety surface. Inadequate drainage will cause premature breakdown of the safety surfaces in the affected areas and possibly void the warranty. Installation during periods where the ground is frozen to any degree, or drainage patterns impacted by same, can result in issues being masked or undetectable. Pro-Techs provides the highest quality products possible for both of our reputations.

Poured-in-Place Rubber

Most importantly when considering a cold weather installation for poured rubber, the minimum installation temperatures specified by the binder manufacturers are paramount. The base, aromatic, and aliphatic binders we currently use set the minimum and maximum temperatures at 50F and 95F, respectively. While we have had success in the past with installations below the recommended 50F, those were based upon site specific factors including minimal humidity/moisture, nominal pad size, and satisfactory curing time before the sun sets and/or the temperature dropped; in combination with heating the binder and/or product on site. It should also be noted that curing times are often extended for the binder when temperatures start to decrease, thereby extending the time that a pad needs to be secured by the customer to avoid vandalism or other damage to the curing surface. This can also significantly increase the risk for moisture exposure and micro-foaming of aliphatic applications. During cold weather conditions below 50F, it is simply not advisable to perform any installation work. These conditions can risk deterioration relating to, or caused by, failure of the bondable materials caused by the temperature or water/moisture damage including cracking, bubbling, delamination, pitting, seam separation, or loss of impact attenuation, which is beyond the control of Pro-Techs Surfacing, LLC.

If a customer would elect to use clean heat and tenting at their own expense, these would need to be present and powered while pouring the surface and at night during the entire curing process. However, even if heaters and tenting are used, the same occurrence(s) can happen. Cognizant of the unique deadlines that may exist on some projects, we are flexible and willing to complete installations at the customers' request provided agreement to signing a hold harmless as respects to the possible outcomes noted above.

Synthetic Turf

The minimum standard installation temperature for turf is also 50 degrees and we caution against installation below this threshold for two reasons; 1. Cutting the turf when it has constricted because of the colder temperatures necessitates a return visit to do additional cuts and trimming when it warms up, and 2. There could be performance issues with the glue and seams.



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Regarding the first issue, our turf manufacturer does not recommend colder weather installations because cuts are permanent. If the turf has shrunk to its smallest size, once it expands it will need kicked and recut which will need to be budgeted for because it will result in a return charge. This is also difficult once the weight of the infill has been added. For this reason, if installation is insisted for by a customer, we ask first if you are going to be using the surface in the winter. If so, we would install it to spec, perhaps not tacking down the fenced perimeter edges every four inches, but rather spacing out the edge fasteners since they will need to be removed and redone after kicking and trimming the turf. A major issue possible is that the cuts made for poles may be altered once the turf expands. If the area is not being used during the winter and you just need it in place to satisfy a punch list, you should consider having us tack it down around the edges with spikes and doing the finish cuts/work in the spring. All risks associated with these cold weather issues are the responsibility of the customer.

The second issue regarding the glue and seams has two parts. If the temps are too low or freezing occurs, the glue may not hold causing a return visit to re-seam. For this reason, it is recommended that the glue be heated to make sure it can adhere and cure properly when applied. While the expanding and contracting in the floating sections of turf may not cause issues, the seams themselves may end up with wrinkles based upon the glue patterns when the turf expands. This can cause a lot of extra work if the seams need to be redone. Again, the customer will need to understand that a return visit will result in additional charges, and accept all risks associated with these cold weather issues.

Sub-Base

Finally, with both systems, the status of any gravel sub-base may be affected by the cold. Any voids in the compacted base caused by frozen ground thawing and shifting can lead to sinkholes, which would be the responsibility of the contractor that did the base work. This could lead to the need to cut a rubber surface which impacts the longevity of the surface or cutting the turf and adding additional seams.

As always, Pro-Techs Surfacing is committed to working with its customers to resolve any installation and scheduling concerns and wanted to provide this information to keep you informed about the associated risks of installing in colder temperatures. Please feel free to contact us to discuss any issues and how we can better pro-actively address them.