



Playground Safety Surfacing Concrete Subsurface Requirements

PART 1 - Evaluate Existing Drainage

The subsurface should be able to accommodate 25 year storm water volume. If significant water volumes cannot escape from the subsurface and water backs up under the playground safety surface, the hydraulic pressure could result in significant damage to the playground safety surface.

1.1. Above Grade Installation

If the installation site is higher than the adjacent grades with natural drainage (adjacent grades slope away from the installation site at more than 1" in 12"), and does not currently collect water, then additional storm water management may not be necessary. The surface water will percolate through the playground safety surfacing, drain across the top of the subsurface and out the edges.

1.2. Below Grade Installation

If the installation site is lower than the adjacent grades and tends to collect water, or if water creates standing puddles on the subsurface, then a subsurface water management system must be installed.

PART 2 - Slope and Planarity

If water is allowed to collect on the subsurface, the binder can fail over time. Water will collect on the subsurface if the slope is less than 2% or if the planarity of the subsurface is not consistent.

2.1 Slope

Subsurface slope should be a minimum of 2% (about 1/4" in 12").

2.2 Planarity

To test planarity, flood the area with water and mark puddles with chalk. Puddles deeper than 1/8" (2 stacked quarters) should be patched. Rough surfaces (variances more than 1/8") should also be patched.

PART 3 - Finish

For best playground safety surfacing adhesion, concrete should have a light broom finish. Ensure that there are no cracks or loose material.

PART 4 - Cure Time

Concrete should be allowed to cure a minimum of 28 days.

PART 5 - Moisture Content

The binder can fail if there is too much moisture at time of installation. If the concrete subsurface is wet, it must be allowed to completely dry before installation begins. To test moisture content, leave a sheet of plastic lying over the subsurface for 24 hours. If moisture is visible under the plastic, the subsurface is still curing or there is too much moisture from other sources.

PART 6 - Optional Acid Etching

Playground safety surfacing adhesion can be improved by acid etching. Acid etching increases adhesion by opening the surface pores of the concrete. Mix 25% Muriatic acid by volume to water (1 part Muriatic acid to 3 parts water). Wash the entire area with this solution. A light broom scrub will be sufficient. This will also assist in removing any spills of diesel fuel or hydraulic oil from installation equipment. After area has been acid etched, carefully rinse the entire subsurface.



PART 7 - Pressure Wash Older Subsurface

Pressure washing is recommended on older concrete to properly clean the area. The importance of cleaning the subsurface is proportionate to its age. If the subsurface is new, it will likely be sufficiently clean to eliminate the need to pressure wash.

Owner, hereby acknowledges that subsurface was not installed by the playground safety surfacing installer, therefore the playground safety surfacing installer is not responsible for the planarity, drainage, moisture content or composition of the subsurface and cannot be held responsible for the immediate or long term performance of the subsurface or changes that may occur to the playground safety surfacing due to subsurface failure. Owner hereby accepts full responsibility for any labor and/or material costs to remove and replace the playground safety surfacing in the event of subsurface failure.

If the playground safety surfacing installer, upon arrival at the site, determines that the subsurface does not meet requirements, Owner will be informed and have the playground safety surfacing installer standby at \$_____/hr/man while Owner rectifies the subsurface.