

Maintenance Guidelines for Tisanos Safety Systems for Playgrounds and Multi Use Areas

OVERVIEW

To maintain optimal playability of the surface regular maintenance is required. In the instance that maintenance procedures are not closely followed, the playability of the surface may be compromised. The maintenance of the surface requires cooperation between the owner/user of the facility and a specially trained maintenance technician. The following terms are intended as follows:

Regular maintenance: maintenance by the owner/user of the surface

Specialised maintenance: maintenance of the surface by a specially trained technician

Heavy equipment, machinery and vehicles are not to be used to maintain a Tisanos surface system incorporating the Play Base 24 / 38 / 50 and 50HD. For these systems maintenance must be performed by hand or with lightweight handheld equipment. Machinery and vehicles specifically designed for artificial turf maintenance may be used for Tisanos artificial turf installed directly over the sub base construction, or Tisanos systems incorporating Play Base 24HD. Under no circumstances are Tisanos systems incorporating Play Base to be submitted to dynamic or static loads that are not associated with normal recreational use of a playground or multi use play area.

This document specifically addresses outdoor Tisanos sand filled or sand dressed artificial turf systems. Some maintenance and cleaning procedures in this manual are therefore not applicable to indoor surfaces.

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1. Period after installation.

Immediately following installation and through the first month after installation, the level of the sand infill may be a bit higher than described in the technical description of the product. After multiple hours of use the sand will consolidate and settle to the required level. After two or three months, depending on the frequency and intensity of use, it may be necessary to add additional sand infill, particularly to the high intensity use areas.

Artificial turf is to only to be brushed when dry. Areas with an insufficient quantity of infill can be filled with the specified sand and brushed in with a stiff brush. Upon request, additional advice on infilling and brushing can be provided

2. Regular Maintenance

2.1. Vegetation

The artificial turf surface is to be checked for weeds, moss and algae by the owner/user every four to six months in the fall and winter seasons and every month in the spring and summer seasons. Depending on the location and surroundings of the surface, it may be that weeds grow in the infill, especially along the edges of the surface. Weeds are best removed by hand. Care must be taken to pull out the roots of the weeds during removal. If weather conditions permit; sunny and dry weather for at least three days, the weeds can be removed with a biodegradable herbicide (weed killer). It is recommended that an environmentally friendly product be used.

If there are trees, bushes and other plants surrounding the artificial turf play area, moss and algae may form in the surface, especially in shady damp areas. In this case the surface will have to be treated with an environmentally friendly anti-moss herbicide or anti-algae agent at least 3 times per year or as often as required.

2.2. Natural contaminants

In autumn, leaves and needles of trees and plants may fall or blow onto the surface. If this material is not removed, it will fix into the artificial turf and subsequently contaminate the infill. This may affect the permeability and the aesthetic of the surface. The same applies to moss and other natural contaminants such as dead insects, dirt, grass cuttings, etc.. It is therefore important to remove natural waste as soon as possible. This is done with a plastic lawn rake, a broom or a leaf blower. When using a brush, care is to be taken not to loosen too much sand infill. A leaf blower works well; blow leaves and needles to one side of the area in the direction of the wind, collect and remove with a plastic lawn rake. When using a leaf blower do not position the nozzle too close to the surface as to avoid blowing sand infill. When using any power equipment, it is essential that no motor oil leak onto the surface, which is very difficult to remove from artificial turf. Moreover, oil may damage the latex layer beneath the turf, which in turn could cause turf fibres to loosen and pull out from the turf backing.

It is strongly recommended that an artificial turf play area not be installed adjacent to a dirt, clay or loose gravel surface.

2.3. Non-organic waste

Non-organic waste such as glass, cans, cups and mugs, cigarettes, fireworks, candy or chewing gum must be handled appropriately. Chewing gum is best removed with ice, but can also be removed with water or ice spray. When ice spray is used, ensure that the Freon level is not too high as to damage the turf fibers. The users of the surface are primarily responsible for non-organic contamination of the artificial turf. To help prevent this problem, it is advisable to ask the users to wipe their shoes thoroughly before entering the artificial turf play area. This practice can be supported with the installation of a foot brush in a grid or shoe cleaning mat adjacent to the play area. "Rules and Regulation" signs can be posted at the play area to ensure that users are aware of these requirements. In the vicinity of the artificial turf surface there should be sufficient waste bins and surrounding footpaths should be paved.

2.4. Brushing

Regular brushing and mat dragging are important procedures that cannot be neglected. To maintain optimum distribution of the sand infill, and to help prevent moss and algae growth, the surface should be regularly brushed every 35 hours of play with a pull brush for artificial turf. A manual pull brush or triangular “A-brush” are recommended (see photos below). The pull brushes must be specifically designed for artificial turf maintenance with low friction fibres to avoid additional wear of the artificial turf. The surface must be brushed alternately in one direction and the other but always in the direction of the seams of the turf.



Manual drag brush



Triangular A-Brush

Regular brushing

Brushing the surface with the pull brush should be done at least twice a month to maintain a consistent infill level over the surface and help prevent growth of algae and moss. For sand-filled turf systems, the Infill should be maintained at a level two millimeters beneath the top of the grass fiber. For sand-dressed systems the infill level should be maintained according to the technical specification for the product. Despite regular brushing moss and algae may develop, especially on the edges in damp, shady areas. Refer to section 2.1 for treatment of moss and algae.

For large surfaces where the artificial turf is installed directly over the sub base construction, or for surfaces incorporating the Play Base 24HD, a small tractor may be used to pull the A-brush. If a tractor is used, the tire pressure of the vehicle must not exceed 10psi or 0.75 kg/cm². Brushing and maneuvers should be performed at very slow speeds. When turning, the tractor operator must use a large turning radius of at least 6 meters. Section 5 in this document contains additional information relative to the use of small tractors.

To maintain an aesthetically pleasing and functional play area a rubber drag mat specific for artificial turf is to be used to maintain the grass fibres in an upright position. For large surfaces the rubber drag mat may be attached behind the pull brush so that a single operation can be carried out for two maintenance requirements.

2.5 Drains

Drain collectors are to be checked and cleaned as required.

2.6 Removing Stains

Recently formed spots are the easiest to remove. Quick response is the message here. Stains of beer, coffee, blood and ice cream are removed with water. Clean the soiled areas first manually and then wash with soapy water, rinse and let dry. On tough stains, use a solution of 3% ammonia water. Oil stains can be removed with perchlorethylene. Remove the stain with a sponge and wash the remains away afterwards. Spots of organic waste can be removed with a solution of water and white vinegar. For mold a solution of 1% peroxide in water is recommended.

3. Specialised Maintenance

Separated or loosening turf seams should be reported and repaired as soon as possible. A loose seam of only 50cm could easily become several meters long unless swift action is taken. Immediately contact your installer if you discover a problem with a seam in the artificial turf.

For surfaces with lines and markings, a symmetric check of the surface is performed to ensure correct turf position. The integrity of all seams and tufted lines is verified. Weeds and other contaminants are fully removed. The edges of the surface are treated with a biodegradable herbicide. With a brush or specialised cleaning unit all loose waste (e.g. paper, leaves, twigs) is removed. The surface is then brushed with a pull brush to remove any remains, leaf particles, etc. The surface is then passed over with a rubber drag mat to return the turf fibres to an upright position. The amount of infill is checked over the entire surface and if required, replenished by introducing new sand and brushing in with a synthetic brush. If necessary, small "sunken" areas are filled with additional sand. Adjacent paving or pavement is swept and cleaned. Drain water collectors are to be checked and cleaned. Upon departure the shoe-cleaning mat is cleaned.

4. Surroundings of the artificial turf surface

Paths around the artificial surface should be paved. Pathways with loose material will inevitably cause contamination of the artificial turf surface. Often these materials have sharp edges causing excessive wear of the artificial turf surface. In the long term this excessive wear could irreparably damage the turf. Once this material has found its way into the artificial turf, it may not be possible to remove because the particles are often smaller than the sand infill particles. Stones, grit and gravel can also account for a significant contamination of the surface of the artificial turf. If only a thin strip of a pavement separates the artificial turf surface from a natural grass area, clippings from mowing may cause contamination of the artificial turf surface. The presence of trees and bushes in close proximity to the artificial turf play area may have a detrimental effect on the surface. During rainstorms, water containing organic substances flows unhindered on the artificial turf surface. These substances can fill the voids in-between the sand infill particles and eventually lead to over compaction. Over compaction of the infill will result in a loss of permeability and safety.

Fences are often close proximity to an artificial turf play area. Dirt and waste that blows through the fence and lands on the artificial turf must be removed. The surroundings of the artificial turf should always be kept clean. Waste around the artificial turf surface may end up on the artificial turf surface. Therefore it is important to keep surrounding area free of weeds, moss, algae and waste to the greatest degree possible. Drainage collectors should be checked and cleaned regularly. If for any reason, standing water forms on the artificial turf surface, contact the installer immediately to investigate.

5. Loads and vehicles

Tisanos systems are not intended for, and must not be submitted to static or dynamic loads that are not associated with the normal use and specified maintenance of artificial turf playgrounds and multi use areas. Failure to comply with this requirement will indemnify Technoah BV of any product liability claims.

Vehicles of any type must not be used for the maintenance of surfaces incorporating the Play Base 24, Play Base 38, Play Base 50, or Play Base 50HD systems. For surfaces where the artificial turf is installed directly onto the sub base construction, or for surfaces incorporating Play Base 24HD, the guidelines related to the use of maintenance vehicles are as follows:

Only vehicles specifically designed and operated for artificial turf maintenance are to be allowed onto the surface. Vehicles with narrow tires or wheels or solid tires or wheels should not be allowed on the surface. Failure to comply with this requirement will void warranties and likely result in damage to the surface and possibly the sub base construction. When maintenance work is carried out with a vehicle, the operator must perform all operations and maneuvers at a very slow pace and turn in broad circles to prevent the tires from moving or damaging the surface. The diameter of a turning circle may not in principle be less than 6 meters in diameter. Tire pressures of vehicles must not exceed 10psi or 0.75 kg/cm². Under no circumstances must a vehicle be left in a static position on the surface for more than 20 minutes. Failure to comply with this requirement will void warranties and may result in damage to the artificial turf and the Play Base system.

6. Snow and ice removal

Snow and ice do not damage Tisanos artificial turf or the Play Base systems. Snow on the artificial turf is best removed using a snow blower instead of a brush or snow shovel. Mechanical removal of snow can damage the turf fibers. By pushing the snow off the surface, pressure is placed on the seams of the turf. The ideal but slow solution for the removal of snow and ice is to wait for the snow to melt naturally. If this is not possible, it is recommended to remove the snow immediately before the surface is to be used. In this way the wind is less likely to cause ice spots that could be dangerous for the users. Powder snow can be removed with a rotating brush or a regular hand-operated snow machine. The height of the brushes should be set so that there is no contact between the brushes and the artificial turf surface. Remaining (frozen) snow must be removed manually.

To melt ice, rock salt can be used. The recommended application rate is 6 kg/m². Melting time following application of salt is approx. 2 hours, depending on climatic conditions. Small amounts of salt left on the turf surface can be removed with water, weather permitting. Do not use other chemicals to melt snow.

For surfaces where the artificial turf is installed directly onto the sub base construction, or for surfaces incorporating Play Base 24HD, the guidelines related to snow removal are as follows:

Heavy, wet snow may be removed with a small snowplow. The edge of the snowplow blade must be covered with rubber or other soft material. The air pressure and size of the wheels should be adjusted so that the snowplow tire pressures do not exceed 10psi or 0.75 kg/cm². Under no circumstances must a snowplow be left in a static position on the surface for more than 20 minutes.

7. Important notes when using the artificial pitch:

- ✓ Always clean footwear of any debris prior to accessing the artificial turf surface..
- ✓ Do not chew or dispose of gum on the play area
- ✓ Avoid flames (cigarettes, etc.) on or near the play area. Sand filled surfaces are fire retardant, but the turf fibres will be damaged with contact to extreme heat.
- ✓ Do not bring food, drinks, bottles or cans onto the play area.
- ✓ Use appropriate footwear (no studs, high heels, etc.)
- ✓ When present, close the gates of the artificial turf facility after use to prevent unwelcome access by people or pets.
- ✓ Immediately notify your installer when problems or damages occur.

For maintenance issue not specifically addressed in this document, please contact the installer of your Tiasnos system.