



## CLEANING AND MAINTENANCE RECOMMENDATIONS

### EPDM fall protection surfaces

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#### Introduction

Synthetic surfaces are made of extremely durable polymers, designed to satisfy all climatic criteria and withstanding a bright variety of strains. With its seamless surface fall protection surfaces requires exceptionally little maintenance. Due to the fact that the surface is firmly installed, no material is discharged. Thus, a fall protection surface always ensures the correct installation height and there is no need for regular arranging or refilling of loose material. Foreign objects are clearly visible on the surface and cannot pose hidden dangers. The flooring is permeable to water so that rainwater with a correspondingly water-permeable substructure can flow away easily.

Despite these many positive features, however, there is no such thing as a completely maintenance-free synthetic floor. Regular checks and maintenance are necessary to preserve the suitability of the surface for its designed use. This basic maintenance is of vital importance. Type and scope of the maintenance varies greatly and can also be influenced by air pollution, adjacent surfaces (sand pits, areas of vegetation) which could leave algae, moss and leaf deposits. The installer's guarantee will usually be conditional on the recommended maintenance requirements being carried out with reasonable diligence.

#### Maintenance

Maintenance procedures are necessary to preserve the lifetime of the surface and to ensure that:

- ✔ the surface is kept scrupulously clean.
- ✔ the normal effects of weathering and polymer aging are not deposited (chalking).
- ✔ the surface is safe for all users (when used as intended).
- ✔ the free drainage of surface water is maintained throughout the life of the surface (in the case of a porous system).
- ✔ the facility looks attractive.

These objectives are achieved by:

- ✔ removing leaves, visible litter and other contaminations from the surface.
- ✔ washing the surface at least once a year using a high-pressure cleaner and brushes with mild, slightly acidic cleaning agents to remove grime, algae and moss growth, the effects of weathering, sand etc.
- ✔ ensuring that salt residues through the winter are removed when spring breaks through.
- ✔ periodically removing weed growth from the perimeter kerb lines.

#### Maintenance Equipment

All equipment should be well maintained and carefully operated to avoid contamination of, or physical damage to, the surface. Spillage of fuel or lubricating oil will damage the surface.



Leaves, pine needles and other detritus should not be allowed to remain on the surface for any length of time. If this does happen, they rapidly rot down, forming a contaminating "skin" on the surface and providing a growth media for algae and moss. A mechanical leaf-sweeper or vacuum cleaner are ideal for removing such loose dirt and plant remains. Restricted areas may have to be cleaned by hand.

When using vehicles and machines, large pneumatic tires and soft brushes along with careful maneuvering of the machinery, is recommended to avoid any damage on the surface.

At least once a year it is advisable to wash the surface with a high-pressure water cleaner. There are many varieties of high-pressure equipment available for purchase or hire, ranging from a simple hand-held lance through to a tractor-mounted version. The additional application of mechanical cleaning (brushing) is expressly recommended.

### **Attention (!)**

The best combination of water pressure and distance to the surface depends on degree of flooring pollution and conditions of flooring. A combination of excessive water pressure and insufficient distance to surface can damage the floor covering. Although some polymeric surfaces can withstand pressures up to 250 bar without suffering damage, water pressure should be adjusted between 120-150 bar. The distance to surface should be from 30 cm or more. In the beginning it is advised to start cleaning with less water pressure and bigger distance to surface. Trial before cleaning is highly recommended.

Many commercial high-pressure water cleaners allow the addition of cleaning agents and fungicides to the water. These chemicals will help prevent moss and algae building up on the surface.

### **Use of cleaning agents**

The use of selected cleaning agents is possible and recommended. In general, cleaners with similar compositions to a bathroom cleaner for removing limescale (slightly acidic, based on acetic or citric acid) have proven to be suitable<sup>1</sup>. Depending on the installation, the dirt water should be collected as far as possible.

Solvents, fuel-, petrol- and/or oil-based substances should be handled with care or avoided because these may interact with the rubber. The use of this kind of substances can occur swelling of the rubber.

Considering that the above-mentioned chemical resilience / vulnerability is not covering the entirety of pigments, further ingredients and, above all, Polyurethane, every cleaner that's applied should be thinned and or removed by rinsing with water. Before using the intended cleaning agent over a large area, it is recommended to test it in an uncritical and invisible area.

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<sup>1</sup> Dilution according to manufacturer's instructions



### Use of grit and thawing agents for surface de-icing

Especially at temperatures below 0°C, the use of sports and leisure facilities must be questioned and the general safety of a sports and leisure area in these conditions must be assessed on a case-by-case basis before use. It is generally recommended that the use of sports and leisure areas be discontinued in the event of frost, ice and snow.

If it is unavoidable to remove ice and snow from elastic sports and leisure floor coverings to make them usable, it is generally recommended that ice and snow are first removed using mechanical measures and tools such as shovels or brooms.

Like on roads and sidewalks, conventional de-icing salts (such as sodium chloride, potassium chloride, calcium chloride) can also be used as a thawing agent on elastic floor coverings made of EPDM granules in addition to mechanical clearing to counteract slippery snow and ice. In practice, icing can at best be eliminated down to approx. -10 °C with normal sodium chloride road salt. The use of pre-wetted salt (liquid mixture in which the salt is moistened with water or a salt solution of sodium, calcium or magnesium chloride before application) is also possible on elastic sports and leisure floor coverings made of EPDM granules.

It can be assumed that the GEZOFLEX EPDM granules are in no way mechanically or functionally affected by the use of de-icing salt. However, it should be noted that the use of de-icing salts can lead to undesirable stains on the floor covering, which are usually completely reversible and can be removed with water. In addition, de-icing salt can lead to accelerated corrosion of metal parts of play equipment, which can result in damage to the equipment.

In addition to the reasons mentioned above, the use of de-icing salt should also be critically questioned for reasons of environmental and water protection and should only be used when absolutely necessary or rather restricted as far as possible. It should also be checked whether the use of de-icing salt is regulated or prohibited in any way at the installation site.

The use of blunting gritting agents such as sand, grit, gravel, mineral gritting granules, organic gritting agents (e.g. wood shavings and sawdust or granules made from harvest residues) or ash is not recommended on elastic sports and leisure floor coverings made from EPDM granules. These materials do not melt ice and snow, but merely remove the slipperiness when scattered. In addition, such blunting gritting agents can at least temporarily restrict the usability or functionality of the elastic floor covering and may even damage it permanently. In this context, a mixture of sand and de-icing salts is also not recommended, as the sand remains on the surface and could promote mechanical wear of the floor covering.

### Cleaning of so-called chalking

With elastic floor coverings made of EPDM rubber products, a slight whitening effect (so-called chalking) can often be observed in the application after a certain period of time under the influence of UV light. This effect is not unusual for EPDM granules. The whitening effect does not affect the mechanical and functional properties of the EPDM granules, but is merely a visual effect that interacts with additional influencing factors such as installation specifications, external factors



such as weather and climatic conditions, environmental aspects, other components of the application and also maintenance and care. Such a whitening effect cannot be completely ruled out, but with a few measures (use of EPDM granules that use high-quality polymer or more specifically EPDM; regular use; appropriate care) the effect can be minimized.

In general, regular cleaning and care is recommended to counteract this whitening effect. The cleaning procedure described above with a high-pressure cleaner and water can be used for this purpose. For regions with an expected strong influence of UV, special weather influences or ozone, a pigment-containing coating of the floor covering can also be considered.

### Access to the grass area / surroundings

On certain playgrounds, pedestrians and maintenance machinery require regular access to in-laid or surrounding grass areas. It is recommended that the crossing points of the surface are protected with adequate covers such as artificial grass, prefab rubber mats, plywood or iron sheets.

### Prevention of damages

To ensure maintaining the surface to a high standard, restrictions should be imposed on the use of the surface:

- ✔ In general, no vehicles should be permitted to drive on the synthetic surface.
- ✔ If heavy-duty vehicles are allowed onto the surface (up to 1'500 kg spread over 4 tires), the load should be spread using boards.
- ✔ No chemicals, oils, fuel, or solvents should be allowed on the surface.
- ✔ No fireworks or cigarettes should be allowed on the synthetic surface

### Damages and its renovation

The lifetime of a synthetic surface depends upon its quality, usage, and its level of maintenance. In general, a normal synthetic surface used intensively will last a minimum of 8 to 10 years before renovation is required. Renovation should be carried out periodically to prevent the total damage of the surface, which would necessitate complete renewal. Renovation must be carried out by professional and skilled contractors with thorough knowledge of this type of work!

There are different procedures for the renovation of a surface:

- ✔ Complete renewal by replacing the total synthetic surface with a new material
- ✔ Partial renewal by replacing the localized worn areas
- ✔ Re-topping or sealing with adequate synthetic materials
- ✔ Partial re-topping in particular worn-out areas.

It should be noted that on permeable surfaces additional sealing or spray coating will reduce water permeability of the surface.

### Paint or graffiti damages

If paint is spilled on the surface or sprayed as graffiti, the use of standard solvents can seriously damage the surface and its properties, as well as the base layer material and



significantly affect the fall protection properties of the flooring. Often repainting the surface or resurfacing the surface with a thin layer of EPDM rubber will be the best option.

#### Disclaimer

All information given in this document is of general nature and is made to the best of our knowledge and belief and is based on experiences. This document is only intended to support the user in his decision whether cleaning measures and cleaning agents are suitable for his intended purpose or not and to explain technical issues that may be relevant to this decision-making process. Therefore, the information provided is not binding and it is user's responsibility to obtain the most recent issue of this document.

As the state of the surface and the use and application of the various cleaning agents, is out of our control, our advice for individual cases, verbal, written or based on tests, does not exempt the applicator from testing the suitability of the cleaning measures, cleaning agents and their applications. It remains the duty of the user to check the suitability of the cleaning measures and cleaning agents. Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives, or distributors, as the conditions of use and the competence of any workforce involved in the application are beyond our control.

