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# **RESPONSIBLE CONDUCT ON SYNTHETIC TURF**



This guide is for everyone involved with the process of ordering the installation of a synthetic turf field, as well as those who already have a synthetic turf field – and wish to prevent rubber granulate from spreading to its surroundings.

## SYNTHETIC TURF FIELDS – FOR THE BENEFIT OF PUBLIC HEALTH AND THE ENVIRONMENT

Fact is that the existence of synthetic turf fields increases the number of hours of activity year-round. This benefits a lot of athletes as well as public health. You can play on synthetic turf fields all year round, and they withstand more frequent and intensive use than conventional grass fields – regardless of weather conditions.

The use of rubber granulate on synthetic turf fields helps ensure that the playing properties, such as resistance and shock-absorption, resemble those of natural grass as much as possible – and that the ball rolls and bounces naturally. Lying between the grass blades, rubber granules (infill material) support and protect blades from wear and tear – and at the same time, granules protect players from getting injured.

Synthetic turf fields with rubber granulate also have great positive impact on the environment; yet, as is also the case in many other contexts, e.g. in connection with the handling of batteries and household plastics, there may be environmentally negative effects, if rubber granulate is not handled correctly. With synthetic turf fields, it is thus important:

1. to ensure that fields are constructed to help prevent the spreading of rubber granules,
2. to insist that excessive refill and the spreading of rubber granulate be avoided in connection with field maintenance (which is indeed possible with simple measures), and
3. to dictate a code of conduct for users, so they e.g. brush granulate off their clothes and empty their shoes, when they have used the field.

Rubber granulate for synthetic turf fields has drawn attention due to instances where granulate has unintentionally spread to nature. At Genan, we are striving for a sustainable future. Our factories have the capacity to spare the environment several hundred thousand tons of CO<sub>2</sub> emission annually, when end-of-life tires are recycled into rubber granulate – e.g. for the application in synthetic turf. If Genan's recommendations for the construction, maintenance, and conduct around fields are followed, you can make sure granulate stays on the field and doesn't spread to nature.

## GENAN

- is a Danish company, which is world leader in the recycling of end-of-life tires
- is a high-technology manufacturer, working with sustainability, the recycling of valuable resources as well as the responsible use of rubber granulate
- focuses on high quality and the manufacture of products with a high degree of purity

Genan has made three guides with recommendations for the construction, maintenance, and responsible conduct around synthetic turf fields.

These guides are based on:

- the results from a newly published, Swedish study
- a new and comprehensive, international literature review on the spreading of rubber granulate from synthetic turf fields, prepared by the Danish Technological Institute (Teknologisk Institut), as well as
- experience from both the Danish and the Norwegian football associations

Recent research shows that if the right measures are taken and fields are both used and maintained responsibly, the spreading of different types of microplastics from the fields to the environment can be reduced to approx. 3½ ounces a year. Approx. 10% of this amount is rubber granulate.



## GENAN INSIDE – CARE FOR THE ENVIRONMENT THROUGH RESPONSIBLE CONDUCT

Caring for the environment is a responsibility that we all share. This goes for everyone, everywhere – also on and around synthetic turf fields.

When installing a synthetic turf field, it is important to incorporate the right measures and to make sure that regular maintenance is performed correctly and responsibly to ensure that granules stay on the field. The conduct of users influences the volume of rubber granulate spreading from the synthetic turf field.

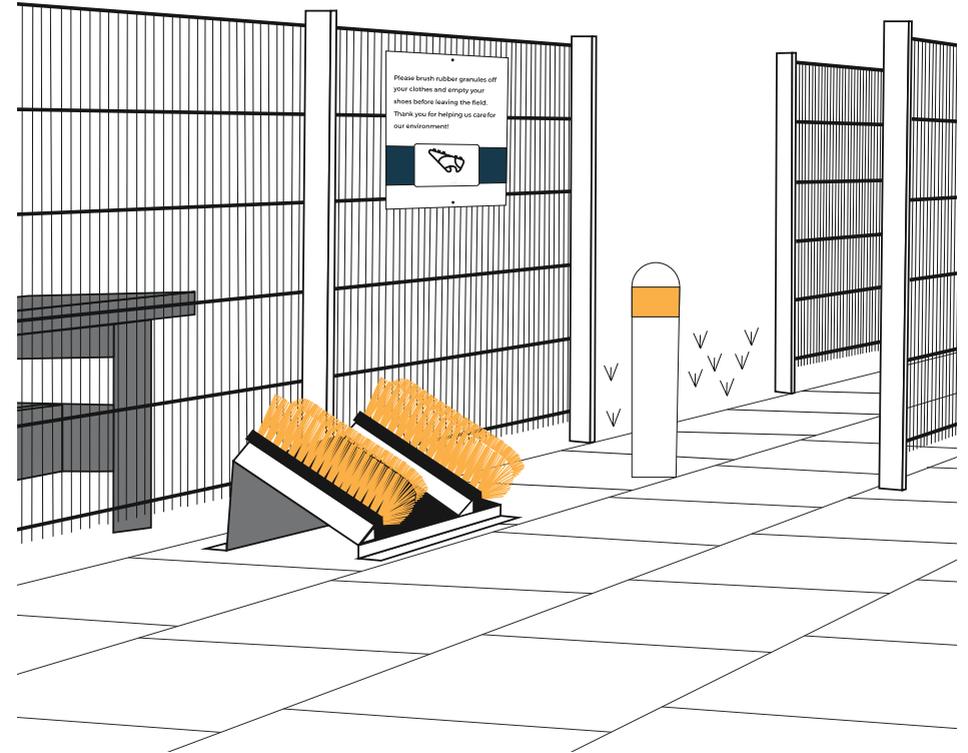
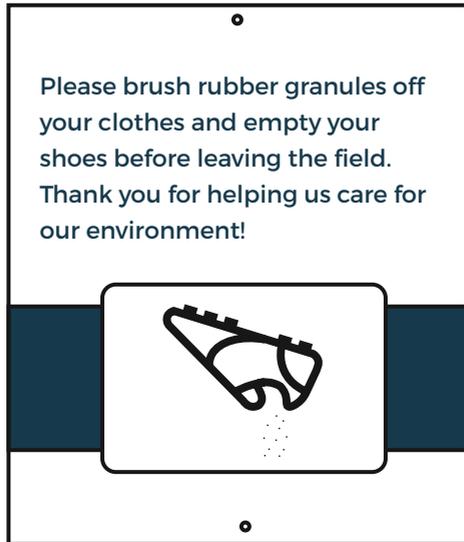
When playing on natural grass fields, it is common practice to take off and clean cleats before entering the locker rooms. If we help each other create a proactive culture in connection with the use of synthetic turf, we can ensure that infill stays on the field – instead of spreading to nature or making its way into the homes of players.



## ON THE FIELD

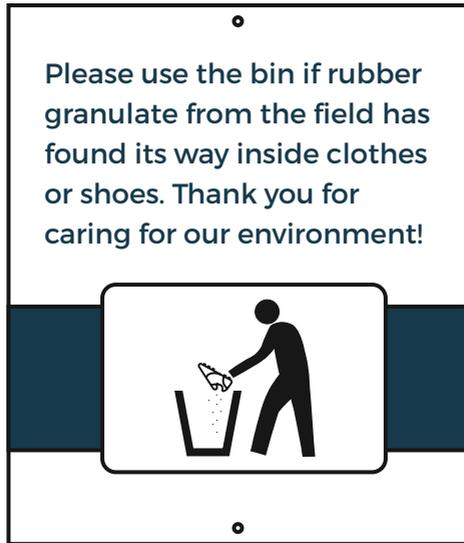
To encourage responsible conduct on synthetic turf, it is imperative that the physical framework supports this goal. Benches must e.g. be made available to urge players to sit down and empty their shoes; and the availability of cleat brushes will make it easy for them to brush off rubber granules.

Action-indicating signs should be put up to remind players and other users to behave responsibly. Signs should be placed at field entrances and exits (clean-down areas) – and be large enough for people to easily notice them. A sign with a simple message encouraging proper conduct to keep granules on the field could read something like:



## IN THE CHANGING ROOMS

Posting signs in changing rooms is also important to remind people how to avoid spreading rubber granulate. Signs should urge users to check shoes and clothing for granulate one more time. Excess granulate is to be thrown into a bin, so it can be disposed of as solid waste for incineration. Changing room signs could read:



## CLUB CODE OF CONDUCT ON SYNTHETIC TURF FIELDS

Apart from signage, it is important that clubs influence the attitude of field users, including staff, coaches, referees and spectators. We must create a culture and routine that make it second nature to remove granulate from shoes, clothes and other equipment before leaving the field.

A sports club should develop and communicate a code of conduct for synthetic turf fields. This code should be communicated through all obvious channels (e.g. website and social media) to all players in connection with the start of a new season, at matches etc. Clear and simple communication as to how clubs want members, guests, spectators and others to behave on and around fields will make it easier for everyone to act accordingly. A club code could be presented like this:



### WE ACT RESPONSIBLY!



In [name of club], we use our synthetic turf field in the following manner:

- 1** Before we exit the field, we empty our football cleats and brush rubber granulate off our clothes and socks.
- 2** We all support responsible conduct around the synthetic turf field – and remind each other that rubber granulate should stay on the field.
- 3** Rubber granulate that makes its way into the changing rooms, is thrown into the bin.
- 4** We also help guests and spectators comply with the above.

# FIND OUT MORE

To motivate and help users of synthetic turf fields behave correctly to prevent granulate from spreading, it is important to take the right measures from the very beginning. Regular maintenance is also important to ensure that granules remain on the field. For further information, consult our guides for the construction and maintenance of synthetic turf fields: "Constructing a Synthetic Turf Pitch – Genan Inside" and "Maintenance of Synthetic Turf Pitches with Rubber Infill – Genan Inside". Both guides may be downloaded on [www.genan.eu](http://www.genan.eu).

If you wish to read more about the knowledge and documentation, on which Genan's recommendations are based, we make reference to the following:

- "Dispersal of microplastic from a modern artificial turf pitch with preventive measures – Case study Bergaviks IP, Kalmar," by Fredrick Regnell, Ecoloop, October 2019
- "Utforming av miljøvennlige kunstgressbaner", Norges Fotballforbund ("Designing environmentally friendly synthetic turf pitches", by the Norwegian Football Federation)
- "Etablér en miljøvenlig kunstgræsbane", DBU.dk ("How to construct an environmentally friendly synthetic turf pitch", by the Danish Football Association)
- "Vejledning om kunstgræsbaner", Miljøstyrelsen, 2018 ("Guide on Synthetic Turf Pitches", by the Danish Environmental Protection Agency, 2018)
- "Mass balances of rubber granulate disappearing from artificial turf pitches with focus on discharge to the water environment", by the Danish Technological Institute, December 2018 / revised May 2019
- "Fact sheet – Rubber Granulate for Synthetic Turf Pitches in Denmark", by Genan, August 2019