



RESPONSIBLE CONDUCT ON ARTIFICIAL TURF



This guide targets everyone contemplating or already in the process of ordering the installation of an artificial turf pitch, as well as those who already have an artificial turf pitch – and wish to prevent rubber granulate from spreading to pitch surroundings.

ARTIFICIAL TURF PITCHES – FOR THE BENEFIT OF PUBLIC HEALTH AND THE ENVIRONMENT

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

The use of rubber granulate on artificial turf pitches helps ensure that the playing properties, such as resistance and shock-absorption, resemble those of natural grass as much as possible – and that balls roll and bounce 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.

Climate-wise, artificial turf pitches with rubber granulate also have great positive impact; 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 artificial turf pitches, it is thus important:

1. to ensure that pitches 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 pitch 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 pitch.

Rubber granulate for artificial turf pitches has attracted focus due to instances where granulate has unintentionally spread to nature. At Genan, we are striving for a sustainable future, and our factories have the capacity to spare the environment several hundred thousand tonnes of CO2 emission annually, when end-of-life tyres are recycled into rubber granulate – e.g. for the application in artificial turf. And if Genan's recommendations for the construction and maintenance of as well as conduct around artificial turf pitches are followed, you can ensure that rubber granules remain on the pitch – and are not spread to nature.

GENAN

- is a Danish company, which is world leader in the recycling of end-of-life tyres
- 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 and maintenance of as well as responsible conduct around artificial turf pitches.

These guides have been prepared on the basis of:

- the results from a newly published, Swedish study
- a new and comprehensive, international literature review on the spreading of rubber granulate from artificial turf pitches, 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 established, and if artificial turf pitches are both used and maintained responsibly, the spreading of different types of microplastics from these pitches to the environment can be reduced to 100 grammes a year. Approx. 10% of these 100 grammes are rubber granules.



GENAN INSIDE – CARE FOR THE ENVIRONMENT THROUGH RESPONSIBLE CONDUCT

Taking good care of the environment is a responsibility that we all share. This goes for everyone, everywhere – also on and around artificial turf pitches.

When installing an artificial turf pitch, 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 pitch. Furthermore, the conduct of users is a factor influencing the volume of rubber granulate spreading from the artificial turf pitch.

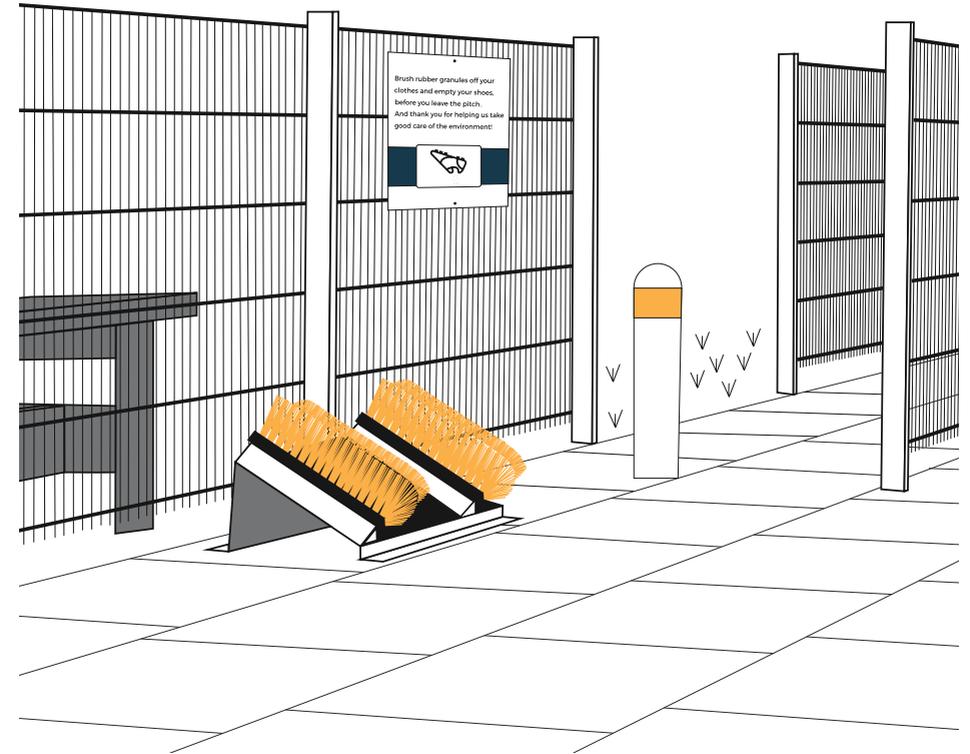
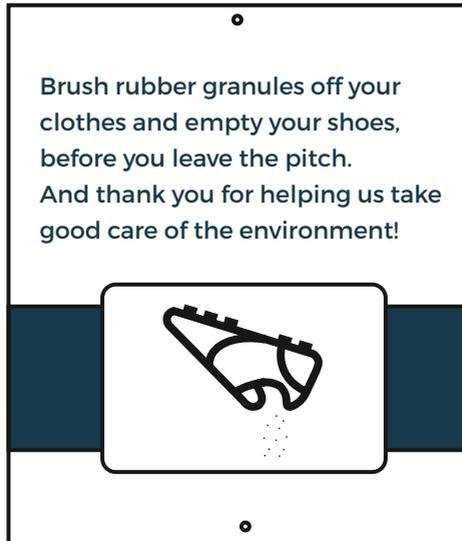
In connection with play on natural grass pitches, it is common practice to take off and clean football boots before entering the changing rooms. If we help each other create a similar culture in connection with the use of artificial turf, we can ensure that rubber granules remain on the pitch – instead of spreading to nature or making their way to the homes of players.



ON THE PITCH

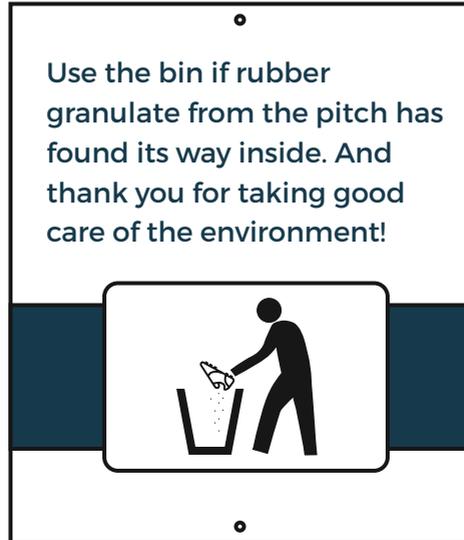
To create a culture for responsible conduct on artificial turf, it is imperative that the physical framework supports this culture. Benches must e.g. be made available to urge players to sit down and empty their shoes; and the availability of boot brushes will make it easy for them to brush off rubber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

Moreover, action-indicating signs should be put up to remind players and other users to behave responsibly. Signs should be placed at pitch access points (clean-down exit 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 pitch, could look like this:



IN THE CHANGING ROOMS

Signposting in changing rooms is also important to remind people how to avoid the spreading of rubber granulate. Signs should urge users to check shoes and clothing for granulate one more time – and throw excess granulate into the bin, from where it will be disposed of as solid waste for incineration. Changing room signage could look like this:



CLUB CODE OF CONDUCT ON ARTIFICIAL TURF PITCHES

Apart from signage, it is important that clubs work to influence the attitude of pitch users and create a culture and some routines which make it natural for everyone – staff, coaches, referees and spectators – to remove granulate from shoes, clothes and other equipment before leaving the pitch.

A sports club may choose to develop – and very importantly: communicate – a code of conduct for artificial turf pitches. Clubs should communicate this code through all obvious channels, e.g. website, 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 artificial turf pitches, will make it easier for everyone to act accordingly. A club code could e.g. look like this:



WE ACT RESPONSIBLY!



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

- 1** Before we exit the pitch, we empty our football boots and brush rubber granulate off our clothes and socks.
- 2** We all support responsible conduct around the artificial turf pitch – and remind each other that rubber granulate should stay on the pitch.
- 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 artificial turf pitches behave correctly to prevent granulate from spreading, it is important to install the right measures at the pitch from the very beginning. Regular maintenance is also of great significance to ensure that granules remain on the pitch. For further information, consult our guides for the construction and maintenance of artificial turf pitches: "Constructing an Artificial Turf Pitch – Genan Inside" and "Maintenance of Artificial Turf Pitches with Rubber Infill – Genan Inside". Both guides may be downloaded on 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 artificial turf pitches", by the Norwegian Football Federation)
- "Etablér en miljøvenlig kunstgræsbane", DBU.dk ("How to construct an environmentally friendly artificial turf pitch", by the Danish Football Association)
- "Vejledning om kunstgræsbaner", Miljøstyrelsen, 2018 ("Guide on Artificial 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 Artificial Turf Pitches in Denmark", by Genan, August 2019