

I&S - 03/2011

# **Technical Bulletin**

### **AMORIM 100% Natural Synthetic Grass Infill**

Amorim Cork Composites has wide range of cork granules that are calibrated in size and weight for the ideal application as a synthetic turf infill. Cork is a natural infill that is 100% environment-friendly and non-toxic.

Cork is an organic, recyclable and sustainable product, that is harvested from the cork oak tree every nine years, without harming the trees. Corks unique closed cell structure filled with an air like gas makes it a resilient moisture proof infill with an exceptional shock absorbing capacity associated with a very low thermal conductivity.

The infill is laid in between the pile to provide elasticity and bouncing properties, and allows the blades of synthetic grass to stand upright giving the grass a natural appearance. The infill is a significant contributor in the prevention of surface wearing in a non-uniform way and the consequent degradation of the surface.



Synthetic turf surfaces have **traditionally been cushioned by the use of rubber granules**. It has since become known (amongst others) that the rubber granules sourced from recycled tires contains all sorts of impurities with justified concerns over its toxicity.



The use of **Synthetic turf** has grown exponentially over the past years for a number of reasons some of them being:

- \* Water is scarce, expensive and needed for priority usages (agriculture and domestic)
- \* The soil needs to be intensively fertilized for growing natural grass and to maintain it
- \* The climate is such that growing and maintaining natural grass is almost impossible
- Natural grass grows well; "the usage of a sports field remains limited to the resistance of natural grass..."

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## **AMORIM Cork - Synthetic Grass Infill**

#### **Rubber Granule**

Granule is derived from old vehicle tyres (one quality from cars, another quality from trucks and tractors), rubber granules are made of shredded black tyres from vehicles that are SBR rubber based.

- \* Quality is very difficult to control and does not always comply with environmental legislation with no guarantee as to the constant quality of the raw material.
- Rubber granules become brittle when subjected to constant UV radiation, which can lead to a gradual hardening (compaction) of the entire playing surface which can then lead to injuries.
- Rubber infill fields can get very hot when temperatures are high, posing a risk of overheating.
- \* Black rubber fillings may release a rather unpleasant odour, and have been proven to contain toxic chemicals and heavy metals harmful to health. Some chemicals are soluble in water and can leach from the fields to contaminate ground water and soil. Synthetic fields wear out and must be replaced every 8-10 years, the crumb rubber's chemical composition makes it difficult to dispose of.







### Infill's side by side

#### **Cork Granule**

Cork is a totally organic product, 100% recyclable with no waste by-products, obtained from the bark of the cork oak tree. It contributes to the sustainability of the forest as well as its inhabitants.

- Cork quality is finely controlled and divided into the selected weight and size.
  Cork quality is constant, and controlled for every batch
- \* Cork is in its natural environment when subject to UV rays, maintaining its resiliency and recovery characteristics, its air filled interior acts like an air cushion throughout its life.
- \* Corks low thermal conductivity due to its natural structure will maintain the turf cooler.



Cork has a natural "woody" odour and does not contain any synthetic or man made substances in its processing, being a natural product there is zero toxicity, or chemicals leaching to the subsoil. Cork is completely recyclable and be disposed of easily as it does not contain toxins.

**100% Natural Cork infill** systems are **recyclable and environmentally friendly**, with tested playing performance adding natural characteristics to the playground, aiming to make the **synthetic turf as near to natural grass** in both look and feel while still providing a safe, cushioned surface that **won't heighten the possibility of injury**.

### Facts:

Natural cork infill systems have already been approved according to FIF 1 and 2 STAR certification.







