EUROPEAN TYRE & RUBBER manufacturers' association

Recycled rubber infill material has a role to play in a Circular Economy

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The European new Green Deal is in line with a vision for a Circular Economy that the tyre industry has been pioneering for decades. Europe, the largest net importer of natural resources in the world, loses 95% of the material value during the first use cycle[1]. By reusing the resources, we already have, we can decouple the European economy from the need of new resources. The recycling of tyres is recognized for its success with over 95% collection rate and a 62% material recovery rate. With regulatory and market imperfections addressed, this could be significantly increased.

Only a very little part of end of life tyres can be recycled in a new tyre for safety but also for performance reasons, so then, the End of Life Tyre management companies have been exploring areas for recycled tyres where the greatest gains for society and the environment can be made. The highest environmental gains are to use crumb rubber as infill in artificial football turf pitches[2] with some 527 thousand tonnes ELTs in Europe that are processed for this purpose[3]. This amount corresponds to 75-80% of the total infill placed on the market[4]. To date there are no material recycling alternatives to compensate for the potential surplus of ELT derived rubber of infill materials, the only other alternative that could attempt to absorb this volume is energy recovery.

The rubber granulates used for infill is heavier than water and does not leave the pitch by itself, nor by wind nor by rain. The properties of ELT infill are such that it sediments. Real life measurements[5] [6] [7] have proven that relatively small amounts of infill leave the pitch with the players and that with simple measures, the losses into the aquatic environment can practically be eliminated[6]. In the very few cases of large numbers of infill losses are attributable to mismanagement, but those losses can be restored, for instance, when the football turf pitch is fitted with precautionary measures.

A major advantage of artificial grass pitches is that its use can take place regardless of geographical location, is more durable than natural grass and can be used in most weather conditions. Comparatively, an artificial turf pitch is equivalent to 3-10 natural grass pitches for annual available playing time. Every Euro invested in football provides 10 euros back to society in the form of economic, social and health effects[7]. But this requires football fields.

To address any remaining concerns, ETRMA supports the implementation of mandatory containment measures. These measures should follow the European Standardisation Organisations (CEN) technical report CEN/TR 17519, as well as certifications such as ISO 14001, EMAS, CERUB.

[1] Ellen McArthur Foundation, 2015. Growth Within: A circular economy Vision for a competitive Europe, page 17. 2
[2] Aliapur, LCA Reference Document June 2010, page 15.
[3] ETRMA contribution to the public consultation on Annex XV dossier, dated 05/2019.
[4] 400 000 tonnes of ELT infill correspond to 527 000 tonnes of ELT, including steel and textile. ELT infill marketshare from Genan: Facts-about climate and environmental benefits, July 2020 version.
[5] H Løkkegard, et al, 2019 Teknologisk Institut
[6] Møllhausen, et all 2017. Forskningskampanjen
[7] Regnell 2019; Dispersal of microplastic from a modern artificial turf pitch with preventive measures - Case study Bergaviks IP, Kalmar.

About ETRMA

The European Tyre & Rubber Manufacturers Association (ETRMA) represent nearly 4.400 companies in the EU, directly employing about 370.000 people. The global sales of ETRMA's corporate members represent 70% of total global sales and 7 out of 10 world leaders in the sector are ETRMA Members.

ETRMA and its members support, develop and promote circular economy and the recycling of tyres, as long as practices respect environment and health. By reusing the resources, we can decouple the European economy from the need of new resources

Though ELT infill is listed as a source of microplastic in the environment, the infill losses to the biosphere can be mitigated