

ETRMA on “Safety of recycled rubber infill material”

Regulations and Knowledge

Rubber granules are a mixtureⁱ to which the general public can be exposed, and therefore has to comply with the REACH restrictionⁱⁱ. In Europe, rubber granules derived from end of life tyres (“ELT”) come from REACH compliant tyres.

According to the analyses published, the main rubber chemicals registration dossiers submitted, and the reactivity of used chemicals, no known CMR substances are present in the granules in concentrations equal or greater than either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or the relevant generic concentration limit specified in Part 3 of Annex I of Regulation (EC) No 1272/2008.

To date, worldwide more than 70 scientific articles and reportsⁱⁱⁱ based on experimental data converge in concluding that there is no significant or scientifically justified risk associated to the use of rubber granules made from end of life tyres.

Recent investigations have shown that tyre recycled rubber is homogenous in composition and contains PAH level lower than 20 ppm (sum of the 8 PAHs classified) . The findings from this study carried out in Italy were presented to the EU Commission and ECHA back in May 2016^{iv}.

Traceability and control is key

Although **rubber granules made from ELT** is the elastomeric material that is most commonly used worldwide as infill in sport fields, many other materials can be used as well (see figure).

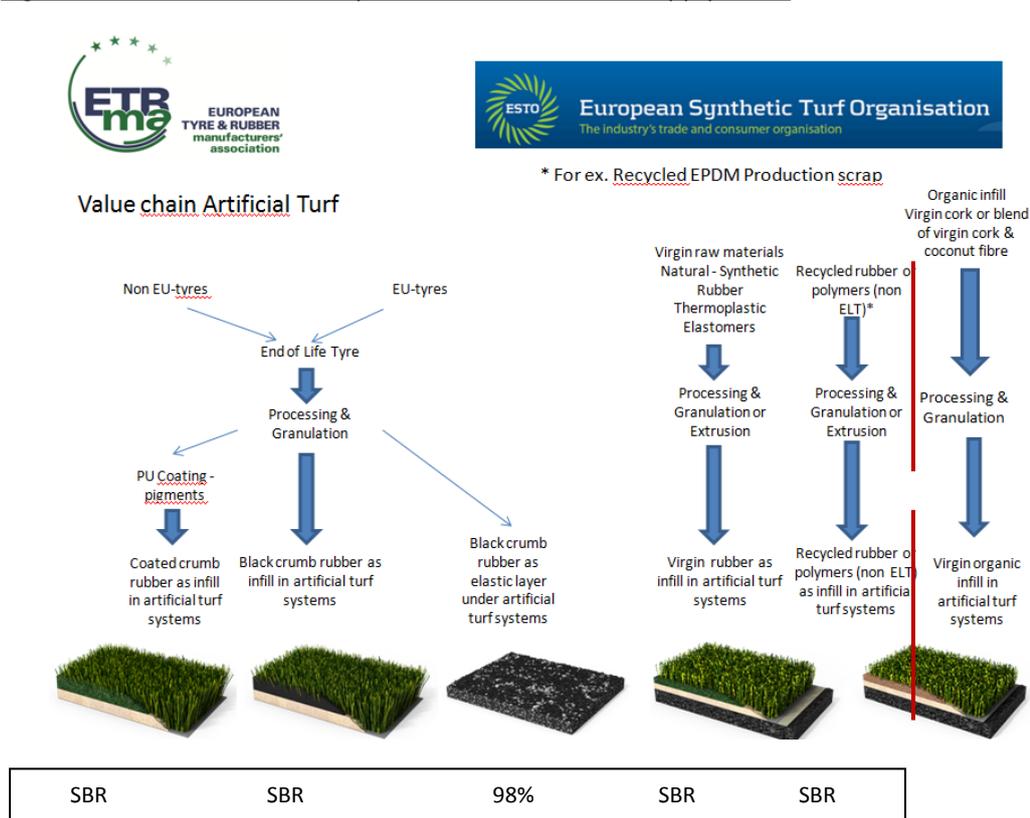
On the market the product sold as rubber granules is called “SBR rubber” and is commonly understood to be exclusively coming from ELT. When it comes to installing artificial turf fields, the supply chain (sourcing, installation, maintenance and refill) involves many different parties, from municipalities and sport clubs to contractors. Although there may be voluntary certification schemes at national level^v, there is no EU harmonised and mandatory control mechanism for the end user. Therefore it cannot be excluded that rubber infill comes from other products than end of life tyres. These granules are then also sold as “SBR rubber” on the market and wrongly associated to ELTs. Traceability and stringent uniform control mechanisms on the source of infill materials is key.

Extended Study

The European tyre manufacturers, represented by ETRMA, would like to stress that, while they are not engaged in the production of crumb rubber, as socially responsible actors in the rubber industry they care about the effects on society of using crumb rubber in any application.

While there is no evidence to date that rubber granules infill (“SBR rubber”) derived from ELT pose a risk to the health of professionals and players, **we want to exclude any remaining doubts**. Therefore, the EU industry in a joint initiative from tyre manufacturers, End of Life Tyre management companies, tyre recyclers and artificial turf field installers is **launching an extensive and independent study throughout the EU**. This research programme was presented to ECHA in July 2016. We are confident that this additional research will corroborate the findings to date.

Figure: The materials that may be used as infill in the supply chain



Notes

ⁱ Caracal 29 June/1 July 2016 - **CA/30/2016:**

“As regards the question whether the rubber granules used in synthetic sports pitches are articles (and therefore covered by the restriction) or mixtures, at the previous CARACAL meeting COM agreed with the majority of Member States that the granules are mixtures”.

ⁱⁱ REACH Annex XVII Restriction entries 28-30: any substance with a harmonized classification as being carcinogenic, mutagenic or toxic for reproduction in categories 1 A or B shall not be placed on the market, or used, as substances, constituent of other substances or in mixtures for supply to general public when the individual concentration is equal or greater than the concentration limits given in the relevant annexes of the CLP directive (1272/2008).

ⁱⁱⁱ https://rma.org/sites/default/files/literature_review_0813.pdf and annex 1 document.

^{iv} This has been further strengthened by a recent study (under peer review for publication) conducted by the ELT company Ecopneus in collaboration with Istituto Mario Negri. After a thorough literature search and data analysis, in 2014, Ecopneus launched an extensive research to (1) determine the content of the classified PAHs in rubber granules from ELT as used on Italian fields, (2) determine their migration rate in sweat and pulmonary surfactant, and (3) assess the risk related to dermal and inhalation exposure. [In Italy rubber granules are coated with 6-7% (wt) of PU resin, laboratory tests (on migration and PAH) were performed on non coated rubber. In the risk assessment the variation of inhalable dust on the fields was taken into account and it was assumed that the dust was 100% rubber (uncoated).]

^v As an example, since 2012 in the Netherlands, a voluntary environmental certificate by the “Milieukeur Institute” confirms the source of the granules and composition (including leaching).