

Rubber infill: no evidence of hazards, but new study to be launched

Following recent publicity in the Netherlands about the potential health hazards of certain rubber granules used as infill in artificial turf, The European Tyre & Rubber Manufacturers, represented by ETRMA, would first of all like to stress that they will never compromise on human health. Therefore, ETRMA announces that, while there is no evidence to date that rubber granules infills (“SBR rubber”) derived from end of life tyres (“ELT”) pose a risk to the health of the 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 about to **launch an extensive and independent study throughout the EU**. We are confident that this additional research will corroborate the findings to date. This study will be additional to the study that we understand will be conducted in The Netherlands by the RIVM.

Rubber granules are a mixtureⁱ to which the general public can be exposed, and therefore has to comply with the REACH restrictionⁱⁱ. In Europe, ELT derived rubber granules come from REACH compliant tyres. To date, worldwide more than 70 articles and reportsⁱⁱⁱ based on experimental data converge in concluding that there is no significant or scientifically justified risk associated to rubber granules made from end of life tyres^{iv}.

Traceability and control is key

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 or 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 which may raise health concerns^{vi}. These granules are still 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.

Since 1996, more than 36 million tonnes of End of Life Tyres have been collected throughout Europe and recovered as a substitute for fuel or virgin raw materials. This has led to nearly eliminating landfilling (less than 5%)^{vii}. The tyre recycling industry is contributing to the circular economy in substantial savings on the use of virgin raw materials, on cost and other environmental benefits. This is largely the result of tyre industry proactive initiative over the last 20 years in supporting R&D programmes towards sustainable recycling routes.

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 an 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

^{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 (1) to determine the content of the classified PAHs in rubber granules from ELT as used on Italian fields, (2) to determine their migration rate in sweat and pulmonary surfactant, and (3) to 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 (migration, pah etc).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).

^{vi} See a case in the Netherlands where people were showing health problems after a synthetic turf field was installed next to their houses. It was revealed that the infill material was NOT from ELTs but from pipes previously used in petrochemistry plant.

^{vii} ETRMA statistics on End-of-Life Tyres