

Is the infill ban the scapegoat to divert attention from most dangerous microplastics?

On the 26th April 2023 the EU member states voted to support a revised REACH Restriction proposal on intentionally added microplastics, which includes a ban of recycled rubber infill materials used in synthetic turf surfaces after a transition period of eight years, before the placing on the market of polymeric infill materials become prohibited.

This solution has been proposed by ECHA on basis of an estimation of an average release of 500 kg per year from each of 32.000 full size pitches installed, making the total estimation of the annual release equal to 16.000 tons.

These data appears to be wrong and overestimated and they have been fully contested by us and the turf industry.

However, if they were true it would have made more sense to introduce, as soon as possible, mandatory Risk Management Measures (RMM) to limit the dispersion down to 50 kg or less and apply the ban and following removal only for the fields that do not comply with the limits.

Unfortunately this option has been rejected, preferring a total ban, which will have the effect to increase the releases.

Indeed the ban will come into force in eight years from adoption, during which polymeric infill materials will continue to be sold and pitches installed without containment measures, increasing the number of pitches, far beyond 32.000 units, that after eight years will remain operational, still for many years, until their end of life, increasing the overall potential releases instead of reducing it.

Now let's take **ECHA's** data for granted, and admit for one moment that the releases from the fields are actually 16.000 tonnes / year. They would correspond to **30 grams / capita** of particles **sizes between 1 to 2,5 mm**. The adoption of the Risk Management Measures (**RMM**) would keep such release into the lower limit of **3 grams / capita**.

To understand the magnitude of such figures we have to compare them with quantities and dimension of other microplastics, which are more dangerous and do not seem stimulate the same concerns from the decision makers.

Every year 4,2 Millions Tonnes of EOL Tyre arise in the EU, Norway, Switzerland and UK. They correspond to about 8,1 kilos per each person living in such countries. Before becoming a waste these tyres went through a progressive wearing process releasing into the environment at least 10% of their weight in the form of very fine rubber powder. It means that every person account for 0,9 kilo (**900 grams / capita**) of tyre wear particles release. If they are intentional or not there could be long to argue, because often people decide to use the car despite more sustainable transports means are available and should be preferred.

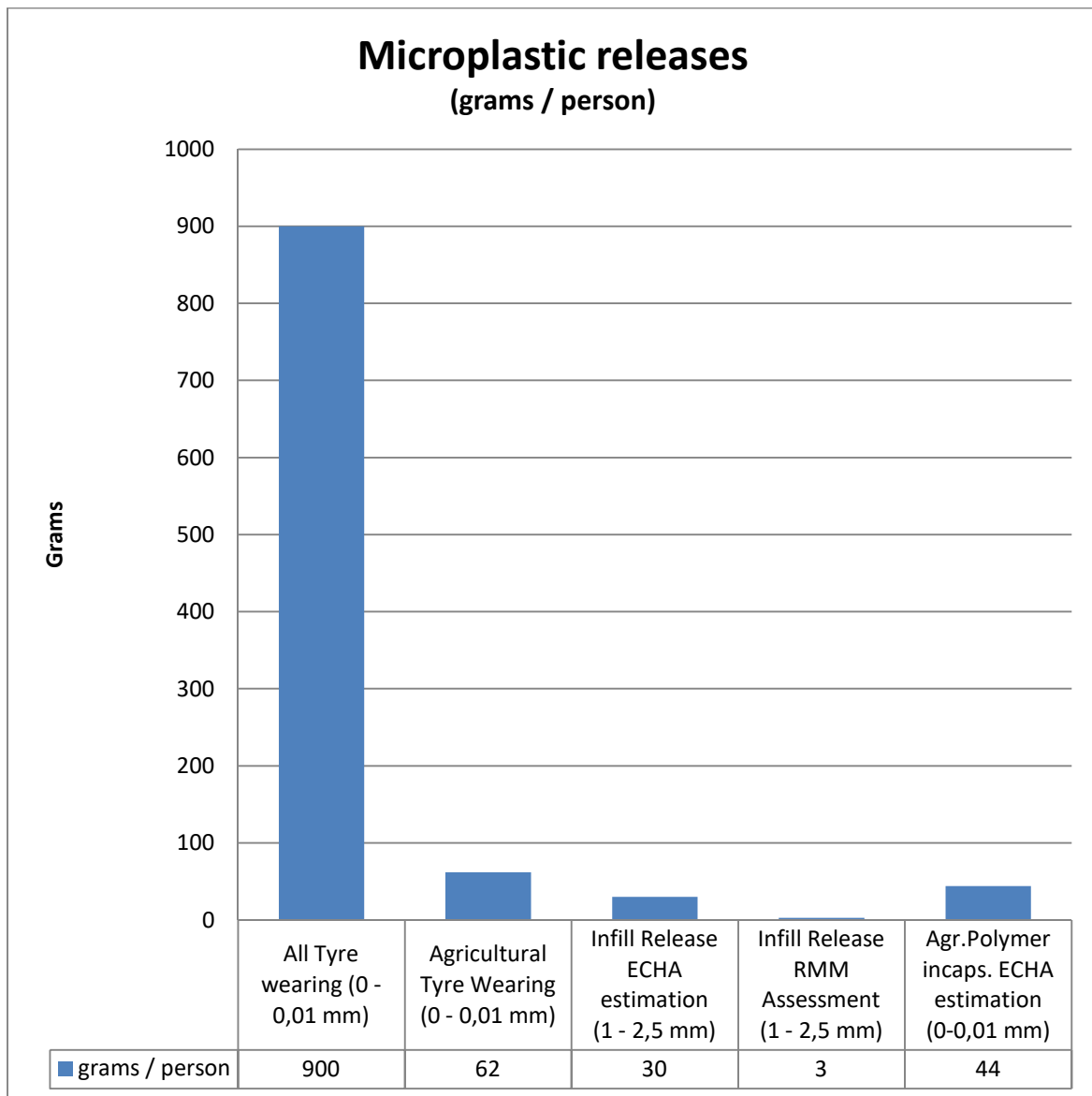
Anyway, it has been estimated that 92% of such releases are PM10 (**size dimension below 10 microns**) and 11% are PM 2,5 (**size dimension below 2,5 microns**).

While small quantities of infill material are spread just in the surroundings of a soccer pitch, tyre wearing particles are generally spread everywhere. However there are other releases which seems to be more dangerous as they are concentrated in agricultural fields, mainly cultivated for foods crops. The first one is generated from the wearing of agricultural tyres, which correspond to **62 grams / capita**. The second one is generated by the polymers used for seed and fertilizers incapsulation, which, according to ECHA report, account for 23.500 tonnes every year and correspond to **44 grams / capita**. Both have a very small dimension (**size below 10 microns**). Altogether they account for over 100 grams / capita and would deserve a careful approach owing to the fine dimension (0 – 0,01 mm) and the destination (directly into the crop fields).

Releases	Tonnes	grams / person	%	particle size	Destination
All Tyre wearing	420.000	900	10,00%	0 - 0,01 mm	Air, water, soil
Agricultural Tyre Wearing	22.000	62,41	0,69%	0 - 0,01 mm	Agricultural soil
Infill Release (ECHA)	16.000	30	0,33%	1-2,5 mm	turf surroundings
Infill Release (RMM)	1.600	3	0,03%	1-2,5 mm	turf surroundings
Polymer incapsulation in Agriculture (ECHA)	23.500	44,44	0,49%	0- 0,05 mm	Agricultural soil

The tyre wearing particles are really microplastics and are more than one thousand times smaller than rubber granulate used for infill, so more dangerous, as they are bio-available. It means that can be easily in-taken by human being as they are breathable.

On these data there are accurate studies and reports while there is not any scientific evidence which shows that 1-2,5 mm rubber granulates are absorbed as such by living organism, nor that they can be fragmented by natural forces down to smaller sizes. In other words: they are not bio-available.



In the light of above data the whole issue is still unbelievable and contradictory. ECHA is focusing its concerns on the smaller releases of bigger particles. Not to mention that the 30, or more likely 3 grams per capita, are a minor secondary effect which can be controlled and managed, face to an important waste stream recycling with major environmental and social benefits.

It is important that the 4.200.000 Tonnes of EOL tyres produced annually be recycled in a sustainable way, like infill material production, rather than feed growing streams of waste export towards faraway, non EU, countries, with low environmental controls. As material recycling is one of the priorities of the Green Deal ETRA calls for more coordinated Policies and Actions to support Circular Economy. Unfortunately we assist to isolated, illogic, contradictory actions which had the only result to by-pass waste hierarchy and enforce more impacting waste management (higher CO2 emission for long distance waste transports finalized to energy recovery, incineration, or worse).

Recycled SBR infill material made artificial turf more sustainable, cost effective and wide spread, making Artificial Turf the cheapest and best performing fields, allowing to spread Sport also in many disadvantaged urban areas, contributing to sports diffusion and reducing social discomfort, especially among young people.

We believe that the infill ban as it has been designed is useless and worsening the problem, and a reconsideration of the data assessment and possible mitigation actions is necessary and urgent.

As there are no benefits deriving from the ban of rubber infill for the environment, nor for the recyclers, as well as for citizens and players, the question arises spontaneously: who will benefit from it ?