European Tyre Recycling Association

Annex XV - Restriction Report

ECHA Public Consultation on Restriction of Intentionally added Microplastics

Points for reflections on SEAC Opinion

Introduction

The rubber granulate of the size of 1-2,5 mm obtained from tyre recycling and used as infill material has been included in the defintion of microplastic and in the ongoing ECHA restriction consultation.

> ***'Microplastic'*** *means a material consisting of solid polymer-containing particles, to which additives or other substances may have been added, and where ≥ 1% w/w of particles have (i) all dimensions 0.1µm ≤ x ≤ 5mm, or (ii), for fibres, a length of 0.3µm ≤ x ≤ 15mm and length to diameter ratio of >3*

The proposal for a restriction considered four options:

- RO1: Full ban of infill material covered by the Microplastics definition (from entry into force)
- **RO2:** Full ban of infill material covered by the Microplastics definition (with a transition period of 6 years)
- RO3: Derogation from ban, but reporting and instructions-for-use requirements
- **RO4:** Derogation from ban conditional on technical Risk Management Measures being implemented to prevent releases the environment (with or without transitional period)

Following the work and amendments of the Dossier Submitters only option RO2 and RO4 (with a transitional period of 3 years) were considered as viable.

RAC Committee during its meeting proposed to cancel option RO4, considering option RO2 (full ban) more effective.

The purpose of this document is to explain why option RO2 is unnecessarly stricts and will be ineffective while option RO4 would be more practible and coherent with the safeguad of the environment.

1. Infill Material and Tyre Recycling

Artificial turf is a complex part of the sport infrastructure that needs to fulfil many technical requirements and parameters in order to be usable.

Sports fields can be installed in a variety of ways i.e., with a solid surface, with a grass-like carpet, as artificial turf or with a loose unbound surface. The base can be constructed on gravel with 100% rubber infill, on a gravel base with a sand/rubber mix-infill, or on an elastic layer with a sand/mix infill. For solid surfaces, the materials are commonly bound with moisture curing polyurethane material or a polymer modified bitumen. Different size granulate is required for each part of the structure and depends upon the ultimate performance criteria of the surface. At times, shred is used as light weight under-fill. The surface materials can be wet or dry mixed, in situ or prefabricated into tiles or sheets of varying thickness and design to meet the requirements of the particular sport.

According to the design and technical solution adopted, the quantity of black granulate used as infill material may vary between 6 and 15 kg / $m^{2.}$.

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It is important to note that the predominance of Recycled Tyre Material (RTMs) for sport surfaces have had a major impact on the reduction of serious injuries to players since they were first used (shock absoprtion, free and safe rotatation of the players' shoes, etc). Over time, questions have been raised about the potential impact to human health and the environment due to the materials.

Infill materials for artificial turf were developed by companies of the tyre recycling sector. The benefit for the environment, in terms of recycling or CO2 savings, are enormous. It is important to consider all of the environmental aspects related to using recycled tyre materials in infill artificial turf, and include in the balance all of the advantages and compare them with the disadvantages.

Approximately 3.400.000 tonnes of post-consumer tyres are collected each year in the 27 EU Member States and Norway. Of the total,± 39% undergo some form of material recycling, *(tyres that are processed for energy recovery are not included* .

The total quantity of granulate produced per year is ± 640.000 tonnes. Until recently, more than 50% of the granulate produced was used in some aspect of the sport sector, corresponding to ±350,000 tonnes, including artificial turf, running tracks, horse tracks, gym and indoor facilities, school sports facilities, among others.

Sport and play surfaces include among others, hockey and soccer pitches, running tracks, tennis courts, artificial turf, turf dressings, putting greens, equestrian areas and children's playgrounds. Among the key requirements for use in these structures are colour, compressibility, durability, elasticity, free drainage, impact attenuation, low moisture content, porosity, as well as size and particle distribution. The use of granulate improves safety and absorbs the energy from impact. It reduces player fatigue, the severity of injuries during play and improves game response.

It is estimated that over 5,000,000 square metres of sports fields were built during the last five years in the EU alone, each of which can utilise approximately 14-15 kg/m^2 - of granulate as infill material and/or top cover. In many states, legislation requires that primary school and municipal playgrounds are paved with shock absorbing materials, initiating a trend for using these surfaces at the more than 150,000 primary schools in the EU. Further, recent UN and EU legislation have provided funds for the construction of fields for young and old in urban, rural and even isolated areas throughout the world.

On one hand ,Recycled Tyre Materials (RTMs) contribute effectively to implement the Circular Economy EU policy, while on the other hand the Sport sector and artificial turf sectors represent a sustainable outlet and a fundamental market for the sector, while improving socialisation and health.

Other solutions are far from effective. The so called organic infills (cork) are short in quantity available and has very poor performance and short duration, requiring frequent and costly replacements. Natural grasses, can no longer endure many hours of intensive use every day, of more and more players, over different seasons, latitudes and climate conditions. Bio-polymers or biodegradable polymers are a dream for this use, because they do not respond to the scope as it is not possible to use a biodegradable polymer for uses that demande–durability with stable performance. Bio-polymers biodegrade rapidly, loosing soon their caracteristics, requiring to continuously recharge the filed with further infill. The parameters of biodegradabiliy fixed by Dossier Submitters (60% biodegradation in 28 days) does not exist for these type of materials and are incomatible with the specific use.

Today, there aren't any alternative materials that have the same performance, lower price, or availability according to market demand. There is not an alternative, robust outlet for RTMs, as the sport market, able to absorbe huge quantites of RTMs. The total,± 39% of material recycling has been attained after 25 years of work in the tyre recycling sector with huge investments, from many European SMEs. For this reason allegations about the existence of alternative outlets for RTMs are groundless and inconistent with the time scale of the transition period. The Turf market is fundamenal to the users, the players and the sector to avoid that the recycling sector and those who rey upon it for their own physical safety – are not forced to make steps back.

A ban on recycled SBR infill materials could lead to many more, and more – severe, play-related injuries to the players without benefit – a further impact could also be a reduction or ceasing of play, particularly among poorer , or more socially at-risk peoples

2. Lack of Realistic Alernatives

The Dossier Submitters, in order to support the full ban of polymeric infill material, mentioned (page 53 of Opinion document):

"SEAC agrees with the Dossier Submitter that a sufficiently long transition period would mitigate most immediate impacts since time is given to industry to find/implement suitable alternative infill material and turf systems and raise their availability."

and then still in the same page:

" During the transition period the availability of alternative infill material and infill systems will rise. While some of these alternatives are at the moment more expensive, it is in principle to be expected that prices would drop because of higher availability."

However these statements seem more or less a wishful thinking, not supported by any data. The alternative materials are just potential solutoion not sufficiently tested, and for which it does not exist a long time monitored on site uses. We will tell more later.

Futhemore as reported by the in the still in the same page

"... many other respondents have stated that some alternatives will not be suitable under certain circumstances (climate professional or amateur play, etc) and also called into question the availability of alternative infill material and infill systems."

It should be recalled that there are two main groups of potential alternatives to avoid polymeric inifll:

a) organic infill
b) no-infill

The most used **organic infill** is the cork produced from oak bark. The yearly available production would allow to cover maximum 10% of the market needs. This anyway would be possible only pushing on a strong exploitations of the existing oaks posing serious issues of sustainability and natural resource depletion (and water and maintenance). Not to mention that cork, as well as other organic materials, have poor performance: low eleasticity, they absorb water and freeze in the winter, reducing further the insufficient elasticity, accopanied by a short duration. And limiting socialization during colder, more naturally isolated periods.

The **no-infill** carpet does not have the peformance required by the regulations. It is not known if and when these performances can be reached. For the moment it is a concept. It should also be considered that no-infill carpet requires 3,5 kg/m^2 of polymeric yarn compared to 1,3 kg/m^2 of the carpet to be infilled. Apart from the fact that we do not know if the no-inifl yarn will fall into the defintion of miroplastics, the carpet is normally subject to soles abrasion and wearing giving origin to very fine microplastics. While the abrasion is lower if the carpet is infilled, in the no-infill carpet it has been we noted higher wearing and higher quantities of yarn to be worn out producing mircoplastics. In this case we are talking of really "micro" plastics. The ban of infill in favour of the adoption of no-infill turf ǂ would be the"perfect murder": ban of 1-2,5 mm granulate that can be contained into the field against extended use of an alternative that would be a bigger source of fine particles that are also more dangerous .

We already assisted in the past with this kind of isues. A non-competitive, non-sustainable product, in order to be successful on the market, needs legal-political protection, thanks to which, they try to push RTMs out of market.

3. Quantity Released

The Dossier Submitters have made the assumption that the total quantity of existing pitches infilled with polymeric infill material correspond to 32.000 full size pitches equivalent. They have also estimated that the average release from each field is 500 kg / year, that makes that overall release equal to 16.000 tonnes / year.

The quantity has been calculated considering additional infill material added sometime to the pitches to balance the compacting effect. **It is widely inaccurate, based on mere estimations and anyway overestimated.**

The Dossier Submitter worked on the folowing data

a) *Quantity of infill added within first two months of operation of the sports pitch: 1 000- 2000 kg per year;*
b) *Compacting effect: 200 to 1 000 kg per year;*
c) *Quantity of infill inadvertently removed by players: 40 kg per year;*
d) *Loss through snow ploughing and other maintenance: 500 kg per year;*
e) *Loss through draining water and ground water: up to 34 kg per year;*
f) *Loss through wind dispersion: considered not to be relevant due to the weight of polymeric infill material.*

On which few a comments can be spontaneously raised. In particular: a) happens only once during turf life, not every year and it is not a proof of granulate release; b) it does not prove nor quantify any release; d) is referred to limited situation of Scandinavian countries, while in many parts of Europe snow is a romantic remembrance of childhood, owing to climate change that made snow and ice disappear in vast European regions; c) and e) can be easily handled by correct behaviour and managment (RMMs).

About point d) snow ploughing we would like to specify that we have been astonished by some unpleasant images, submitted during the 2019 consultation, showing snow drifts made with the snow from ploughing, dumped into the environment. However, this behaviour that we condemn, does not belong to a correct handling of a field and a sport centre, as well as of any other type of activity. It does not represent the average of pitch management and it is not correct that it be taken as a reference for all Scandinavian or northern pitches and more in general of all European pitches. The amount of granulates removed with snow clearance (500 kg.) had a major impact on the estimation of granulate release. Also water discharge has been pointed out as one the main causes, however figures about this cause shown in the Dossier go from extremes of 2-3% up to 75%. In this condition it is difficult to consider the infil material and the artificial pitch itself the source of such a significant release. The inclusion of the infill material in the restricion proposal seems more likely the understandable reaction to some negative episodes and situations, that shall be better handled and amended and finally sanctioned.

Also the assumption that the releases are due by 15% to Down The Drain (DTD) and by 85% to Direct Releases to the Environment (DRE) are questionable and contradictory (Table 7, page 36 Background document). DRE are considered for instance for seeds and other products are put into direct contanct with the enviroment. This it not the case of the infil material that is put in a sealed, confined site: the pitch. The DRE situation is limited to granulate removed with the snow and discharged directly into the environment. These cases should be limited to 15% of the cases (page 375 of Back Ground document Rev 2 of 25th May 2020) now we learn that they account for 85% of the cases. We have the impression that the data and estimation have been based on many inaccurate figures and wrong assumptions. And, we would like to see the original data used and the sourcing of these data.

It should also be recalled that there is not an accurate monitor and measure of the actual releases of microplastics from a pitch, deriving from diffeent causes as per points a) to f) above, done in different conditions. The total average release of each field estimated by the Dossier Submitter, shown is 500 kg. / year at the end is an estimation of estimations.

4. Other erroneus data assumption and wrong calculations

The Dossier takes into consideration many different types of microplastics of different dimensions, sectors, uses. We would like to attract the attention on the following aspects:

a) The concept of "Micro"

'Micron' defines the size of a particle that is 1/1000 of 1 mm. The SBR rubber granulate used as infill material belongs to the 1 - 2,5 mm range.

The range of 1 nano-millimeter (that corresponds to 1/1.000.000 of a mm) to 5 mm seems to be too broad a range, and to include materials with different behavior patterns and impact, which would require a different approach to the restriction parameters.

Sub-ranges should be evaluated differently, because there is a very different impact from 0,1µm, from 2,5 or from 10 PM (that corresponds to 2,5 or 10 micron) compared to the impact of 1 - 2,5 mm material.

The definition is formulated in a way that includes any kind of polymers. Those that are subject to a strong fragmentation into microscopspic particles, and have a very high release into the environment, together with polymers, like recycled SBR of 1-2,5 mm ***that do not fragment,*** that, if duly used do not release into the environment.

As admitted by the Dossier Submitters at page 63 of the Back Ground document:

" ... there is currently no information on the bio-accumulation behaviour of nanoplastics, although they are likely to be more biologically active than larger microplastics, and the role that these materials could play in the bioaccumulation and transport of HOCs or plastic additives."

More homogenous groups of materials and sizes would allow a clearer understanding and control of the possible dispersion and impact, a more appropriate restriction and more practical and efficient solutions.

b) Intentionally added

It should be recalled that the Microplastic issue originated with the use (or abuse) of intentionally added microplastic to cosmetics and detergent to increase abrasive, exfoliating, cleaning properties of these products. The scope of these materials was / is to give specific properties to the products, and after having done this to be released into the environment, either down the drain, disposed in Municipal Waste or through direct release into the environment, as their scope is reached after an action (washing, rinsing, etc.)that entrain a deliberate released in the environment.

Recall that SBR infill materials **<u>are not added</u>** to a product ***and not*** to be released into the environment. Their function is satisfied if the rubber granulate remains in the pitch. If they are released into the environment, it is by accident, which can be reduced. A number of very good potential solutions to reduce accidental dispersion have been submitted under this consultation and should be pursued.

There are many viable possibilities to effectively improve the 'containments' or "borders" of artificial turf fields and to create further barriers to avoid dispersion of the material into the environment, as well described by organisations of the artificial turf sector.

The addition of small amounts of Infill materials during the life of a field is due to the compaction of the granulate during play, and does not correspond to an amount of rubber released into the environment. This should be taken into consideration and verified avoiding unpleasant suspicions.

c) the difference between a single use product and a long duration product

It should be recalled that European Parliament and the EU Council reached an agreement to ban single-use plastic products. If this is the policy target, on which we agree, it should be noted that recycled infil materials are materials for ***long lasting use***. The ***life of the field is normally 12-15 years,*** but when the field is replaced with a new field the infill ***materials can be re-used for further 15 years.***

The use of infill materials is not 100.000 tons as estimated by Dossier Submitters (table 15, page 73 Back Ground Document), this is an "additional" use. The quantities actually in use can be estimated in 3.840.000 tonnes (32.000 pitches x 120 tonnes). This is the magnitude of the installed infill materials. It is an environmental, infra-structural durable and operational "asset". The release of infill materials, estimated by the dossier submitter, of 16.000 tonnes should be put in connection with the above durable installed infill materials, to calculate the ratio of the release, equal to 0,4% (16.000 / 3.840.000).

d) the difference between virgin and recycled

Recycled SBR granulate used as infill material represents about 90% of all polymeric materials used as infil material for artificial turf, it seems that it is the only recycled material that falls into the microplastics definition. Developing a product, an application from a recycled materials and create a value chain from the source to the market requires years and years. It is a different pathway compared to a product from virign materials, where, in case of restriction, you simply shift form one supplier to the other. It is odd that these added values have not been taken into consideration by the Dossier Submitters.

e) the difference between expenses for consumption and for investment

The majority of microplastics analysed in the Dossier are products that perform their function immediately and only once. This happens for detergents, cosmetics, etc. In this case the purchaser and the user are the same subject and in case of a ban, the damage for the purchaser-consumer would be limited to a very small amount of product, and the transitional period would have the scope to finish the stock and buy a different type of product and to allow the producers to adapt their production. Cosmetics and detergents are produced by multinational companies with good financial capacity to convert their processes. Who consumes these products purchases them with a single act with the scope of using them for the duration allowed by the quantity in the package. The purchaser of an artificial pitch is normally a Sport Association (not for profit organisation) that makes an investment that should last at least 10 years in order to provide a social service to the users, who are people who play foot-ball. The purchaser and the user, in this case are different subjects. The costs and the risks of the investment are mortgaged over a long period of time. The field is "consumed" by end users through an endless number of repeated actions, whose duration cannot be quantified through a simplified calculation done on the quantity of the "product" put on the market, considered microplastics.

Many Sports Associations do not make profits nor accumulate savings, and have limited access to finance. They have no possibility to replace the field before its end of life, simply becasue they cannot afford it. This is also the reason why infill materials derived from RTMs have been succesful. They made artificial turf affordable, also to small Associations, giving access to foot-ball to socially disadvantaged groups and less affluent people.

The producers of RTM infill materials include about 300 SMEs who are part of the tyre recycling value chain work. They are in between the arising of 3,2 million tonnes of EOL tyres produced every year in Europe, and the various outlets for RTMs. The fact the market for RTMs did not grow beyond 39%, tells us something about how long the pathway is to create new markets, which is much longer than the time estimated for the transitional period.

5. Transitional Period

The transitional period offered under option RO2 has been grossly calculated making inaccurate simplifications. Let's consider it correct, just for a moment (***but it is not***), the assumption from the Dossier Submitters, that *"only a limited number of pitches (10-20%) would need to be prematurely replaced"* (page 53 of SEAC opinion document) - however they are many more. This statement seems as if all the fields in Europe belong to one single subject, whose damage, would be limited to, 10-20% of his total capital. On the contrary it would be an irresponsible choice, because the owners of these 10-20% field may be a single field owner, that, as we said, for the majority are small, local, not for profit organisations, that would collapse, if they could not complete the mortgage payments for their investment.

The 10-20% (but there are more) Sport Associations hit by the ban are not entitled to share the economic loss of the dismantled field with the whole category. They should have to bear the loss, but as they cannot, they will close. Their closure would advantage rich Associations, if they will find it convenient to open a field on the outskirts or poor neighborhoods, or simply would reduce the opportunity for people of these areas to have access to foot-ball and other field sports.

The unfairness of the transitional period in the case of full ban, as designed in the Dossier, is already causing a major drop in the demand for artificial pitches. Who would buy an expensive durable project under this climate of incertainty?

If a ban is the final decision – it should be discussed with thie directly involved. A fair transitional period should be fixed in a way that the pitch should be kept working until its end of life.

6. Costs comparison

We read from the Opinion Document that the cost-effectiveness ratios calculated by the Dossier Submiters at age 41 of Opinion Document would be 33,3 €/kg of emission avoided for RO2 and 2,2 €/kg of emssion avoided for RO4, respectively.

It is not clear why then, if the RO4 is more effective , why has it been cancelled as an option by RAC committee.

It is our understanding that the above ratios are simplified parameters to compare the various option's effectiveness. It should be noted what these ratio ***do not say***. In fact, the consequence of the adoption of RO2 option would be:

- closure / bankruptcy of many Sports Associations
- loss of sport and social opportunities for many people
- closure / bankruptcy of tyre recycling facilities
- strong reduction of tyre recycling and its benefits to the circular economy
- increase of export of tyre waste
- increase of incineration of tyres

This is to responds to who could comment that 33,3 €/kg of RO2 is any way an acceptable ratio compared to 2,2 €/kg of RO4, or to other sectors. It is not clear how these data should be read and compared each other. We note from table10 at page 62 that detergets with the ratio of 1€/kg and leave on cosmetic with the ratio of 870 €/kg, are the extremes value. One side products that go 100% down the drain (DRE) on the other side products used in very few milligrams per person per year. This does not help very much the discussion. We also note that as reference would be taknen 133 €/kg, 337 €/kg and 870 €/kg, but still it not clear what are the criteria that make these figures sufficiently reliable to determine the closure of an industry.

It would be more significant to compare *"the restriction cost in € per kg of microplastic used"* (table 38, page 160 of BackGround document), that the Dossier Submitters estimated in 5 €/kg for RO2 that seems nothing compared to 367 €/kg for leave on cosmetics. This seems a more understandable and comparable index.

We do not know how many grammes of cosmetics are used by a person per year, but we know that one single pitch requires 100.000 kg of infil material that make the restriction cost equal to 500.000 € per field. This would also be roughly the cost to replace the field. Considering that the cost for RO4 has been calculated in 1 €/kg, that correspont to a total cost of 100.000 € per field, the very practical question is, who will pay the difference between RO2 and RO4?

7. Containment, Maintenance and RMMs

According to what is specified in the Opinion document (page 23):

*"When the Dossier Submitter considered that risks from unintended, but not inevitable, releases could be minimised by appropriate conditions of use and disposal then the ban does not apply, but '**Instructions for use and disposal requirements'** were proposed instead. This is notably the case for the placing on the market of the substances and/or mixtures containing microplastics listed below.*

- *...*
- *Where the microplastic is contained by technical means to prevent releases to the environment during end use*
- *..."*

This is in fact the provision fixed in the proposed restriction, paragraph 5.a. *"Substances or mixtures containing microplastic where the microplastic is **contained by technical means to prevent releases to the environment** during end use "* will not be subject to restriction.

Artificial turf is a complex civil engineering structure that **"contains by technical means"**, the infill material. As this aspect could be enforced by even more specific technical means, it could be worth while to consider a specific derogation for SBR infill materials used in artificial pitches duly built (or improved) in order to prevent release to the environment. Suitable solutions have already been adopted in various fields and they work very well. These circumstances have been reported very well by ESTC and other organisations.

We understand that the inclusion of SBR in the defintion of microplastics is also due to some cases of dispersion of rubber granulate from artificial turfs, consequent to irregular maintenance operations, like snowplow operations on some artificial turfs, e.g., in Scandinavian countries, which created major concern.

These are extreme and isolated situations that do not represent the stadard of the sector and should be addressed locally rather than as an entire industry.

The Dossier Submitter also stated that about 15% of pitches apply correct Risk Management Measures. We think that this is a good start and would be extremely negative to pass a ban that would hit also organisations that operate correctly. We think that this model or equivalent RMMs should be supported and extended. Perhaps it would make more sense if the they consider forming a sector-wide evaluation body that would focus on potential issues and work together to rectify them or ameliorate them over time – and the long-haul. – rather than destroy an industry that contributes so much to so many - as well as the circular economy.

According to the principles of the Circular Economy, adopted by the European Commission, the extension of product duration should be encouraged, as well as recycling and re-use through best practises and responsible behaviours, capable of producing further benefits other than a reduction of microplastics, such as waste recycling, reduction of CO2 emissions, societal benefits, etc.

Following this logic it would be appropriate to give priority to RMMs rather than dismantling and incinerating 7.000.000 tonnes (weight of whole 32.000 pitches, carpet + infill) of fields as proposed by Dossier Submitters.

We agree that there also other aspects that must be taken into consideration by RMM that could include educational and training programs for constructors as well as users and maintenance people.

In fact, occasionally, as a result of play on the turf, small amounts of granulate are tracked from the pitch on the players' socks or shoes. Training-education programs addressed to players could drastically reduce the quantity of rubber granulate incidentally taken out of the field with the shoes. A few, easy behaviours and actions, will reduce dispersion increasing respect for the environment. It is our understanding that Turf organisations and Sport Associations are ready to cooperate, as described in some responses already submitted.

8. Tyre Abrasion

We noted that the Dossier Submitter is aware of the release into the environment of micropalstic produced by road tyre wear that have been estimated in 176.300 tonnes per year, the dispersion into surface water has been estimated by the Commission in 94 000 tons per year (page 74 of the Back Ground document).

Indeed, the amount of microplastic annually produced by road tyre wear totally released into the environment (not just into surface water) are much higher, estimated and not less than 355.000 tons (that corresponds to 11% of the weight of post consumer tyres collected every year in europe). (Or the equivalent of all of the OTR tyres arising annually in the EU)

It is surprising that these vast quantities of what are certainly microplastcs are not discussed further – and that the infill materials that are totally different in nature, with an underlying positive ecological value, are identified as potentially dangerous.

In fact 3.550.000 tons of new tyres are produced from virgin materials each year, equivalent to approximately 3.200.000 tons of post consumer tyres at their end-of-life, or± 355.000 tons lost due to wear from tyres on the road ach year.!! Tyres release about 10% of their weight into the environment as microplastics.

The 350.000 tonnes of SBR tyre rubber infill granulate used every year (see above paragaph 1), are 100% obtained from recycling and the dispersion into the environment of particles that are not micro, is just incidental and very low. We assume the limit admitted under RO4 equale to 50 kg / year per pitch is equivalent to 1.600 tonnes per year, equal a ***percentage released of 0,46%.***

However as we explained in paragraph 4, the percentage released should be calculated on permanent stock of infill material actuatlly installed and operational of 3.840.000 tonnes. In this case the percentage drops to 0.04%.

Product	Material used (input)	Quantity used	Materials released	Quantity released	Percentage released
Average Microplastics	Virgin Polymers	> 44.600 Tonnes	Virgin microparticles	26.400 Tonnes	60%
New Tyres	Virgin Rubber	3.550.000 Tonnes	Virgin micoroparticles	**355.000** Tonnes	10%
Infill materials	Recycled SBR	**350.000 Tonnes** *	Recycled particles 1-2,5 mm	1.600 Tonnes	0,46%
Infill materials	Recycled SBR	3.840.000 Tonnes **	Recycled particles 1-2,5 mm	1.600 Tonnes	0,04%

(*) Tonnes of infill material put on the market every year

(**) Tonnes of infill material actually and permanently in use.

From another perspective, it leaps to the eye that 350.000 tonnes of rubber granulate produced every year from tyre recycling offsets the 355.000 tons of microplastics produced through the tyre wearing. Wouldn't this be enough to support RO4 option?

These simple considerations give a clear description of the real situations and the magnitude of the impact on the environment.

9. Draw back of a full ban as per RO2 option

The RO2 option is the *"Full ban of infill material covered by the Microplastics definition (with a transition period of 6 years)."*

The RO2 option is based on a traditional approach, that might work with simple products, but not with a complex infrastructure (pitch), that has technical parameters to satisfy, a rigid supply chain, a thoughtful market, demanding end users. A pitch is designed to last 10 years that can become 12-15 in case of less intensive use. Turf producers have been doing R&D to increase sustainability and durability of the carpet that may extend the life of the pitch. For this reason a trasition period of 6 years does not make sense.

A ban with 6 years transition period would immediately stop the sales of artifical turf with polymeric infill. This demand cannot be satisfied by alternative products that are not yet available, and which no one can tell if and when they will be ready.

The release of rubber granulate in the environment would not decrease over this period, as the owners of the pitches will not be motivated to do adopt any RMMs. On the contratry, to offset the economic loss of the fields that they will have to close, they may reduce also the normal maintenance, causing even more risks of release.

It is not clear how a pitch that is a durable infrastructure of 7.000 sm and a lipstick may have the same transition period. It seems that SEAC is aware of this as at page 53 of the Opinion Document we read about RO2 option: *"SEAC notes that there does not seem to be enough information available to arrive at a sufficiently robust and meaningful cost assessment."*

Still at page 53 of the Opinion Document there are certain allegations that require our comment and an invitation to make a deep reflection, such as:

- *... **80-90 % of the pitches can be refurbished/replaced** at the end of their foreseen lifespan according to the Dossier Submitter. Considering the fact that the average lifespan of an artificial pitch is 10 years SEAC finds this plausible. SEAC does however recognise that, at the moment, alternative pitches are **more expensive than ELT pitches**.*

It is not specified how Dossier Submitter may state this as the real quantity of fields that will arrive at the end of life in a certain moment could be established only by a census. Further more, the life of a field depends by the number of hours that the field is used every year, which is different from field to field and from year to year.

We think that the fields that will arrive to end of life during the 6 year transition period are much less then 80-90%, and that this exposes many field owners to a premature replacement of the field at higher costs for which they are not ready and, so to major losses and bankrupcies.

However we cannot open here a discusson about the acceptable percentage of fields to be prematurely replaced, we simply want to note that it is not possible to decide a ban on the basis of estimatons.

- *"During the transition period the availability of alternative infill material and infill systems will rise. While some of these alternatives are at the moment more expensive, it is in principle to be expected that prices would drop because of higher availability."*

This allegation is simply a tautology. At the moment only 5% of pitches use non polymeric infill material because, apart from lower performance, they are expensive and there is a limited quantity available. A ban of polymeric infill material will create an anomalous demand on organic infill pushing the increase of the prices even higher. In order to reduce the price it is necessary to first saturate the demand by offerring at least 95% of the missing product on the market. It is a long way off for this to be demonstrated, or that this could be possible and it might not happen in 6 years.

Without entering into the discussion between the Dossier Submitter and SEAC about the correctness of the costs associated to RO2, if they are € 9.600 million or less, we note that it is a huge amount of money with a strong impact, not just on the foot-ball players, but on the Sports Associations, Pitch producers and installers and communities that support them.

The impact on Tyre Recyclers will be tremendous. Tyre recyclers will be the most affected by a ban. It is important to underline that there are not alternatives market that can absorbe the quantity of RTMs that go to the artificial turf market. It should also be noted that these materials have been perfected over three decades – of tireless work by SMEs and Micro companies that support this sector.

The Dossier Submitter affirm (page 60, Opinion Document):

"There are however alternative markets where this excess infill material could be put to use such as the manufacture of flooring, athletic tracks and other surfaces or in pyrolysis and black carbon manufacture. It is therefore unknown if and to what extent these lost benefits are a significant factor.

We can respond to this question. These products have developed many years ago. Their markets are very small, compared to Artificial Turf and more or less saturated. We are surprised about how decisions that impact the lives of thousand of workers can be adopted on such superficial believes. Yes, there are potential markets – in different industries and just as it took 30 years to perfect these materials, it may take as long for the next major development – and in the interim? The users of these fields? The communities that rely upon them? The managers and owners ? …And, the producers?

We are wondering who will get benefit from a ban. The environment? Probably not. So who?

10 . Benefits from RO4 option

The RO4 option is the *"Derogation from ban conditional on technical Risk Management Measures being implemented to prevent releases the environment (with or without transitional period).*

RMMs have been already tested as effective and applied in at least 15% of the fields in Europe. They could be easilty extended to other fields and contribute to a strong, effective, reduction of release of granulate into the environment.

We read from the Opinion Document, page 54: *"During the Consultation a wealth of information was submitted on potential means to limit infill release to the environment. Based on this it is clear to SEAC that ways to limit or even eliminate releases of infill material into the environment are widely available. Effective measures can be and are already implemented on existing fields. More far-reaching measures are then ready to be implemented when synthetic pitches have reached the end of their lifetime and need to be refurbished/replaced.*

Despite there are various information about costs, but also without entering into this discussion, it is evident that this solution is extremely less expensive than the ban. According to the Dossier the costs associated to option RO4 are € 1.300 million. The corresponding effectiveness ratio is 4,5 €/kg instead of 33,3 €/kg of RO2.

This option would allow reducing the granulate release into the environment to a negligible amount. It would also adopt a virtous path in line with the circular economy and more be respectful of the enviroment at large and the needs of citizens.

- a more responsible use of recycled materials
- consolidation of a sustainable use of RTMs
- support to material recycling vs incineration and landfill (no need to dispose about 7.000.000 tonnes of installed pitches)
- CO2 reduction
- a more responsible behaviour from foot-ball-players
- no depletion of cork oaks

Conclusions

We thought it useful to summarise the main data in the table below that we hope may stimulate some reflections.

According to what has been explained in the Dossier the adoption of RO2 would not reduce the release of microplastics into the environment and would not be cost effective. For what we tried to explain it would generate major environmental and economic problems in the Tyre Recycling value chain, in the Turf industry and Sport organisations.

RO4 options as described offer a more realistic approach and for what is our knowledge is more comptabile with the organisations involved.

Definitions	**Restriction Report**	**ETRA Comments**
Sizes	0,1µm ≤ x ≤ 5mm	1 mm ≤ x ≤ 2,5 mm
Microscopic	Yes	No
Transfer within the food chain	Potentially possible	Improbable
Bio-accumulation	No Information	Excluded
Resistant to environmental biodegradation	Relevant	Not relevant as they are confined in the pitch
Biodegrade by fragmentation	Theoretically via nanoplastics	SBR granulate does not fragment
Intentionally added	Yes	No
Single-use plastic product	Yes, there are10 products to ban	No, iit is a durable goods, Infill is used 2500 hours / year up to 15 years, and can be re-used a second cycle of 15 years
Consumption vs Investment	Applied consume products woth short useful life	Artificial turf is durable infrastructure
Pathway into the environment	DTD, MSW, DRE (*)	Incidental and could be prevented
Containment by technical means	Not considered for Infill materials	Applicable and advisable
Quantity released	From 10% to 70%	Max 0,036%
Source	Normally from virgin materials	100% recycled
Adequatelly controlled	No	Yes

European Tyre Recycling Association

Labelling requirement	Availabe option	Could be adopted
Restriction to placing on the market	For uses that inevitably release to the environment	Not this case
Effectiveness Ratios	RO2 33,3 €/kg, RO4 2,2 €/kg	RO2 not sustainable - RO4 sustainable
Restriction Costs	Other Microplastics € 1/kg	RO2 5 €/kg - 500.000 € / pitch RO4 1 €/kg - 100.000 € / pitch
Percentage released	Other Microplastics 60% - Infill 16%	- 0,46% on quantity put on the market yearly - 0,04% on quantity pemanently in use
Offsets release with other benefits	Other Microplastics: No	Recycled tyre inifll material put on the market every year (350.000 tonnes) offsets the annual release of micropwders fromt yre abrasion (355.000 tonnes).

(*)
DTD: Down-the-drain
MSW: Municipal solid waste
DRE: Direct Release to the environment

From the above, there are quite a number of benefits with a responsible use of recycled SBR infill material, that may be achieved by adoption of effective RMMs. For this reason ETRA supports adoption of RO4 option.

The RTM market has been created over the years without incentives, but with the committment of being sustainable and competitive. We never acted to put competitors and alternative products out of market, that is what, frequently, happens to our companies and our materials. We would like to have the chance continue our work that is in line with Circular Economy priorites established by the EU Commission.

20th August 2020

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