Part III. Expert section

Part III contains questions for which expert knowledge is required, but all types of respondents are welcome to respond. It includes questions on the sources of microplastics pollution being assessed by the European Commission (pre-production pellets, tyre wear particles, synthetic textiles, paints, geotextiles and detergent capsules) and on the policy measures reducing unintentional release of microplastics.

Part III. B. Tyre wear Particles

7) To what extent would you agree with the following measures to reduce microplastic emissions from tyres?

	Completely agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Completely disagree	I don't know /Not applicable
Tyre design in order to reduce abrasion	○	○	○	○	◉	○
Legal limit on tyre abrasion	◉	○	○	○	○	○
Labelling of tyres in terms of abrasion	○	○	◉	○	○	○
Requirements on road infrastructure to reduce abrasion	◉	○	○	○	○	○
Improve capture and treat road run-off water	○	◉	○	○	○	○
Improve road cleaning in high emission hotspots	◉	○	○	○	○	○
Higher fees in Extended Producer Responsibility for less performing tyres	○	○	○	○	◉	○
Artificial intelligence and advanced driver assistance systems in vehicles to reduce abrasion	○	◉	○	○	○	○
Other	◉	○	○	○	○	○

Please explain

500 character(s) maximum

The design of tyres (and of the road surface) has an impact on the generation of tyre and road wear particles. Working on tyre design is working on performances and compromise on trade-off. A regulation should identify the target performance (legal limit) considering also the trade-off with other regulated performances, while individual design choices to deliver on target balancing the other regulated and non-regulated performances, remain within manufacturer expertise.

Part IV. All addressed sources: pellets, synthetic textiles, tyres, geotextiles, detergent capsules and paints

16) How much do you agree with the following measures to reduce microplastic pollution in general?

	Completely agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Completely disagree	I don't know /Not applicable
Common system to monitor and report microplastics releases along the life cycle	○	◉	○	○	○	○
Specific waste water treatments in urban waste water treatment plants	○	○	◉	○	○	○
Specific waste water treatments in recycling plants	○	○	○	○	○	◉
International agreement	◉	○	○	○	○	○
Other	○	○	○	○	○	○

17) Please provide any additional information regarding microplastics and the reduction of emissions, in particular for paints, geotextiles and detergent capsules?

2500 character(s) maximum

Robust and reproducible standardized test method is crucial:
The availability of a representative, reliable, accurate and reproducible method to test and measure tyre abrasion would be pivotal for any future step and assessment.
There are no harmonized methods available at this date. In this regard, our sector supports the implementation of a robust proposal for tyre abrasion as recently launched at UNECE level.

Single Particle Identification & Sample treatment from water(Q16):
The absence of a harmonized or standardized and reliable test method for single particles identification, sample treatment from water and final analysis of mass constitute a major gap. The different methods under development for microplastics are only partly suitable. The analytical results are needed for validating modelling efforts and for the risk assessment of TRWP in the environmental compartments . [For more in depth reference, consult: https://www.etrma.org/wp-content/uploads/2019/10/final-scientific-report-on-tyre-and-road-wearparticles.pdf]"

Tyre Label/EPR:
In addition to dependency on the representativeness and separation power of the test method, consumer awareness and corresponding behavior, it is indispensable to include in a cost-benefit analysis the efforts needed for a consistent market surveillance. -
Life-Time EPR scheme should clarify the responsibilities of all parties involved. The generation of TRWP is influenced by many factors, including some that are not directly under the control of tyre producers (e.g. vehicle weight, tyre pressure, driving conduct, road surface , ...). Public authorities in charge of road building and maintenance have a role to play in minimizing the generation of TRWP

Comprehensive assessment is a prerequisite:
ETRMA urges the Commission to thoroughly assess the efficiency and feasibility of any policy options in order to select the most appropriate instrument(s) for reduction/mitigation of TRWP. Such in-depth, comprehensive cost-benefit analysis should be based on, amongst others criteria, technology maturity and neutrality, environmental impact, consumer attitudes/driving behaviour, vehicle characteristics need to be fully considered.

The international dimension is important too. Microplastics is a global problem and the companies operate globally. There is already commencing work in this direction within UNECE - Therefore, the international dimension is supported for best efficiencies for the environment.

18) Please provide any information if a significant fraction of the release might be in form of very fine particles (smaller than 1 micron, also called nanoplastics), either in general, either for one of the specific sources, and which consequences that might have on possible measures?

2500 character(s) maximum

Studies [1], [2], [3] on TRWP size and morphology have reported wide size distributions with particle sizes ranging from a few microns to more than 300 microns.
Except in some specific cases like studded tyres [4], Where nanoparticles coming from the studs and the pavement have been observed, no evidence of Tyre and Road Wear Particles smaller than 1 micron have been reported.

References

[1] - Cadle, S. H., & Williams, R. L. (1979). Gas and particle emissions from automobile tires in laboratory and field studies. Rubber Chemistry and Technology, 52(1), 146e158.
[2] - Dannis, M. (1974). Rubber dust from the normal wear of tires. Rubber Chemistry and Technology, 47, 1011e1037.
[3] - Kreider, M. L., Panko, J. M., McAtee, B. L., Sweet, L. I., & Finley, B. L. (2010). Physical and chemical characterization
of tire-related particles: Comparison of particles generated using different methodologies. Science of the Total Environment,
408(3), 652e659.
[4] - Amato F., "Non-Exhaust Emissions - An Urban Air Quality Problem for Public Health; Impact and Mitigation Measures", Elsevier & Academic Press, 978-0-12-811770-5, 2018
[5] - Gustafsson, M., Blomqvist, G., Lunden, E. B., Dahl, A., Gudundsson, A., Hjort, M., et al. (2009). NanoWear: Nanoparticles
from the abrasion of tires and pavement. SE-581 95 Linköping Sweden: VTI (Swedish National Pavement and Transport Research Institute).

Contact

ENV-B01-ARES@ec.europa.eu