Updated Terms of Reference of the Task force on Tyres' abrasion (TF TA)

Note: further amendments introduced through revision 1 to this informal document are highlighted for clarity.

A. Introduction

1. Microplastics are synthetic polymers released from a wide range of sources. They can be introduced in the environment intentionally or unintentionally, and they affect all environmental compartments, including air, water, soils / sediments and biota. A European Commission study[1], reported that automotive tyres are the highest contributor of unintentionally released microplastics in the environment.

2. Tyre wear is caused by the friction process between tyres and the road surface; therefore, tyre wear is emitted wherever vehicles travel. Tyre abrasion (i.e. the amount of tyre material released per km travelled) is a metric that could be applied to define tyre wear, and when normalised to the load, allows for type approval of tyres based on their environmental impact. Another important metric linked to tyre wear is the mileage potential which is also connected to the loss of tread depth.

3. During the 185th session of the World Forum (WP.29), the European Commission emphasised the need to work on tyres' microplastic emissions following the priorities set out in the European Union Work Programme – UNECE Activities 2022-2023 Proposals under the responsibility of the Directorate-General for Internal Market, Industry, Entrepreneurship and Small-Medium Size Enterprises (DG-GROW) (Informal Document WP.29-185-17). In parallel, the Working Party on Noise and Tyres (GRBP) and the Working Party on Pollution and Energy (GRPE) in their programmes of work identified the need to consider the development of a tyre abrasion test method with the aim of controlling and mitigating tyre wear particles – and thus the release of microplastics in the environment.

4. It was agreed to create a Task Force (TF) to work on the development of a standardized methodology for measuring and limiting tyre abrasion.

5. This proposal establishes the Terms of Reference for the TF Tyre Abrasion (TF TA).

6. The aim of the TF TA is to prepare and to propose a new requirement to UN Regulation No. 117 under the 1958 Agreement for the type approval of tyres. TF TA will report to and consult with both GRPE and GRBP.

B. Objectives

7. The UN Regulation will address the tyres abrasion performance by determining a standardized measurement method which will allow for the quantification of the microplastic emissions in the environment. At the same time, TF TA will investigate the inclusion of abrasion rate in the proposed UN Regulation and a characterisation methodology for the mileage potential index, based on the abrasion measurement method.

8. The future UN Regulation will apply to new pneumatic tyres.

[1] Investigating Options for Reducing Releases in the Aquatic Environment of Microplastics Emitted by (but not intentionally added in) Products – Report for DG-ENV of the European Commission

9. TF TA shall:

   A. Develop a robust procedure for measuring the abrasion of tyres: Test conditions and methods;
   B. Define the acceptable uncertainty for the tyre abrasion test method(s) and assess the uncertainty of the tyre abrasion test method;
   C. Based on the abrasion test method, define a characterisation of relative mileage potential index (e.g. by measuring the tread depth reduction of the tyres and other metrics/calculations, in the context of the abrasion test method, even considering potential needs of integration to the abrasion test method needed for this study);
   D. Evaluate the abrasion performance and tread depth reduction of a wide range of tyres available in the market;
   E. Define abrasion limits for tyres in order to limit the emission of microplastics to the environment; and
   F. Develop a proposal **for a new** ~~of amendment to~~ UN Regulation ~~No 117~~ for the type approval of tyres in respect to their abrasion.

10. TF TA shall work in the framework of the 1958 Agreement and shall report to both GRBP and GRPE.

C. Rules of Procedure

11. TF TA shall be open to all participants of GRBP and GRPE**, and to other relevant experts by invitation of the co-chairs**.

12. TF **TA** shall be co-chaired by the European Commission and the United Kingdom.

13. The Technical Secretary is taken by the representative of ETRTO.

14. The working language will be English.

15. The process will pursue consensus. When consensus cannot be reached, the co-chairs of the TF TA shall present the different points of view to GRBP.

16. The progress of the TF TA will be reported to GRBP and GRPE as an informal document by one of the co-chairs.

17. All documents and/or proposals must be submitted to the co-chairs and the secretary of TF **TA** in a suitable electronic format at least one week before a scheduled meeting.

18. An agenda and the latest draft document will be circulated to all members of TF in advance of all scheduled meetings.

19. All TF TA's documentation will be made available on the dedicated ECE website.

20. TF TA will endeavour to submit working documents only where they are in a sufficiently finalised state. Where it is necessary to introduce further amendments to a working document through an informal document, TF TA should limit these to items enclosed in square brackets or of a minor or editorial nature. The working document should include a section in the justification to explain clearly what parts are still to be decided in the informal document and to what extent these are relevant to the key concepts of the proposed regulation.

D. Timeline

21. The aim of TF TA is to present**:**

For C1 tyres

(a) an informal document on C1 tyres abrasion test method(s) for consideration during the 78th GRBP in September 2023 (submitted for information to the 89th GRPE in June 2023);

(b) a working document to amend UN Regulation No. 117 introducing C1 tyres abrasion test method(s) for adoption during 79th GRBP in February 2024 (submitted for feedback to the 90th GRPE in January 2024);

(c) a working document to **introduce a new UN Regulation on the type approval of tyres in respect to their abrasion, including** ~~amend UNR 117 introducing C1 tyres~~ abrasion limits**,** for adoption during the **83rd** ~~82nd~~ GRBP in ~~September 2025~~ **February 2026** (submitted for feedback to GRPE in June 2025) to allow WP.29 adoption at the latest in June 2026. **The document will include abrasion limits for C1 tyres and a technical proposal, based on available test results, to secure inclusion of both the vehicle test method on public roads and the indoor drum test method.**

(d) an informal document to report on the test method improvements and joint work plan to reduce measurement uncertainty and improve correlation between methods for consideration during the 83rd GRBP in February 2026;

(e) a working document to amend UN Regulation No. [X] (on the type approval of tyres with respect to their abrasion), for adoption during the 84th GRBP in September 2026, targeting reductions in the measurement uncertainty and improvement in correlation between the test methods.

For C2 tyres

(f) ~~an informal document on C2 tyres abrasion test method(s) for consideration during 82nd GRBP in September 2025 (submitted for information to the 93rd GRPE in June 2025);~~

(g) a working document to amend UN Regulation No. ~~117~~ **[X] (on the type approval of tyres with respect to their abrasion)** introducing C2 tyres test method(s) for adoption during 83rd GRBP in February 2026 ~~(submitted for feedback to the 94th GRPE in January 2026)~~;

(h) a working document to amend UN Regulation No. ~~117~~ **[X]** introducing C2 tyres abrasion limits for adoption during 86th GRBP in September 2027 ~~(submitted for feedback to the 97th GRPE in June 2027)~~ to allow WP.29 adoption in March 2028.

(i) for C2 tyres, should the test method**(s)** established for C1 tyres prove to be suitable also for C2 tyres, or a subset (e.g. LI separation at LI 107), the defined deadlines may be advanced.

For C3 tyres

(j) an informal document for C3 tyre abrasion test method(s) for consideration during the 84th GRBP in September 2026 ~~(submitted for feedback to the 95th GRPE in June 2026)~~;

(k) a working document to amend UN Regulation No. ~~117~~ **[X]** for C3 tyres, on abrasion test method(s) for adoption during 85th GRBP in February 2027 ~~(submitted for feedback to the 96th GRPE in January 2027)~~;

(l) a working document to amend UN Regulation No. ~~117~~ **[X]** introducing for C3 tyres abrasion limits for adoption during 90th GRBP in September 2029 ~~(submitted for feedback to the 101st GRPE in June 2029)~~. to allow WP.29 adoption in March 2030

22. In parallel to the above activities, TF TA shall evaluate the feasibility of characterizing tyres with respect to their "relative mileage potential calculated performance" e.g. through an abrasion-based index. Upon confirmation of the feasibility, to prioritize this activity for C1 tyres, with a target to deliver in ~~September 2025~~ **February 2026** ~~an informal~~ **a working** document with a proposal for the characterization of C1 tyres "relative mileage potential calculated performance".