

**ARGUMENTS IN FAVOR OF A NEW SEPARATE REGULATION FOR TYPE
APPROVAL OF THE TYRE WET ADHESION**

Transmitted by the Experts from the European Tyre Rim Technical Organization (ETRTO)

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1. a) At present GRRF has not yet expressed a clear statement on how to issue a regulation on tyre wet adhesion.

b) At present there are two Regulations, Nos. 30 and 54, considering tyre types from the point of view of safety related items such as:
 - identification of the dimensions to allow interchangeability,
 - identification of the category of use and load/speed characteristics to a specific endurance test to assess minimum safety requirements

These Regulations specifically disregard the actual aspect of tread pattern.
 2. On the contrary, the proposed content of the amendments to Regulation No.30, and very likely in future to Regulation No. 54, intent to control the tyre adhesion on wet surfaces, completely independent from endurance parameters. In fact:
 - the test speed proposed is significantly lower than the tyre maximum speed and there is a proved lack of influence of the tyre load carrying capacity (allowance that the test load be between 60 and 90 per cent of maximum load is in fact specify).
 - the predominant influence is assigned to the actual tread pattern configuration which, in fact, represents the major factor affecting tyre adhesion on wet surfaces as it is in the case of tyre/road sound emission.
 3. The proposal amendments to include into Regulation No.30 tyre adhesion on wet surface identify a tyre range rather than a tyre type, meaning a group of tyres which differ in dimensions and performance characteristics but have in common the type of tread pattern design and hence their performance on wet surfaces.
 4. The type of test required for the type approving tyre wet adhesion performance (as well as tyre/road sound emission) is strongly influenced by adverse weather and ambient conditions (e.g. rain or temperature of test track), which in some occasion may limit the tests to a limited time slot in the course of a year (avg. 8 months out of 12). Moreover, an outdoor test capacity

is available only during daylight and for measuring e.g. tyre/road sound emission or tyre adhesion performances has to take also into account the scheduling of test for product innovation and developments, joint test with vehicle makers for co-development, press events for presenting new products, test for type approval, test for conformity of production.

5. Instead the test procedures for performance approval are based on indoor equipment, which can run 24 hours a day for 365 days a year. Moreover it is not affected by weather and climate conditions so theoretically its capacity can be consider available for 24h on every working day.
6. The time schedule for a new type approval for safety performance levels is very short due to the requirements from the vehicle manufacturing industry to receive the approval certificates no more than two weeks after the date they have accepted a tyre type for the equipment of their new vehicles.
7. This time schedule will have to be extended sometimes by four to six months if also tyre adhesion on wet surfaces should be tested at the same time.
8. At present some countries only require conformity to some Regulations and have shown no interest for either tyre/road sound emission or tyre wet adhesion. Therefore they can be supplied for a long time with tyres not in conformity with either limit.
9. Due to the proposed limits, which will remove from the market some per cent of the existing tyre types, it is in the interest of the tyre industry to supply only type approved tyres to those countries where a legal requirement exist, whit no restriction for the other countries. For this reason it is desiderable to identify those tyres and the easiest way is to refer to them to two separate type approvals.
10. Amending Regulation No.30 to include prescription on wet adhesion will cause a change in the series of amendment, which will link new type approvals to concurrent wet adhesion approvals also for products destined to countries not requiring the wet adhesion conformity.
11. It is therefore necessary to distinguish tyres type approved for just safety performance from tyre type approved for safety performance and sound emission or wet adhesion.
12. A separate Regulation will allow flexibility in the process of access of new countries to the 1958 Agreement, especially in view of the proposal for a parallel GTR on the Global Agreement.
13. A separate Regulation will not interfere with the concept of a unique EU Directive as right now Directive 92/23/CEE refers to two separate ECE Regulation Nos. 30 and 54 and the addition of tyre/road sound emission level to the Directive was done by means of a separate procedure and the assignment of a separate type approval number. The proposal is to assign three separate type approval numbers; one for the safety related performances of the tyre type, another followed by the letter 'S' (sound) for sound emission conformity of the range of

tyre types and a third followed by the letter 'W' (or 'G') for the wet adhesion conformity of the range of tyres.

14. For type approval marking on tyre sidewall, the proposals for a modular approach have already been considered by the Industry and submitted to GRRF, in order to restrict to one single approval number (type approval on safety performances) stamped on the tyre to certify with some suffixes (the 'S' and/or the 'W') conformity to multiple requirements.
15. Most of the requirements for tyre wet adhesion stipulated as amendments to Regulation No. 30, and very likely in future to Regulation No. 54, will be identical (and in most cases repetition of those already specified by the regulation on tyre/road sound emissions). It would therefore be more efficient to stipulate those requirements only once in a separate Regulation, be it the same tyre/road sound emission or a new one.
16. Conclusions

The ETRTO would appreciate if the above justification suggesting a separate new draft Regulation or as alternative a consolidation of the wet adhesion requirement with tyre/road sound emissions are taken into account and this proposal be used for further discussions within WP.29/GRRF instead of proposals for amending Regulations No. 30 supplied by the ad-hoc Working Group.

It shall be reminded that requirements to set-up an approval for tyres based on their wet adhesions proprieties were initiated when some authorities expressed their fears that improving tyre/road sound emissions as per the new EU requirements could reduce traffic safety by jeopardizing tyre wet adhesion performance. That clearly links an approval for sound emission to a control on wet adhesion.

Regulations Nos.30 and 54 shall continue to be used to regulate the tyre safety performance, whilst the new draft Regulation as proposed in this document should regulate the wet adhesion in isolation or conjunction with the tyre/road sound emission independently of the type of tyre (passenger car or truck and bus, new or retreaded), for Contracting Parties having this specific requirements.
