Tyre category definitions and requirements for tyre use on roads under winter conditions

Submitted by the Experts from Germany
References

• Definitions in Regulations under the responsibility of GRRF
  Note by the secretariat
  Informal document GRRF-78-04
  (78th GRRF, 16-19 September 2014
  agenda item 12(c))

• Definitions in regulations dealing with tyres
  including the definitions analyzed and proposed for consolidation
  across the different UN Regulations
  Informal document GRRF-82-21
  Submitted by the experts from ETRTO
  (82nd GRRF, 20-23 September 2016
  agenda item 7(j))
Situation

The provisions and legislation for the use of tyres on roads under winter conditions are different amongst the Contracting Parties (CPs) of UNECE.

In UN Regulations different definitions apply to “Snow tyres” designed for use on roads in winter season or on surfaces with snow or ice, corresponding to different technical properties and performance requirements.

As an example „M+S” marked only tyres do not need to meet performance requirements for use on snow surfaces in contrast to tyres marked with the Alpine symbol (“3-peak-mountain with snowflake“).
Some CPs, as for example Germany, are already implementing performance requirements and corresponding markings for use of Snow tyres into their legislation.

In some cases the definitions of tyre category of use in UN Regulations are not compatible to implementation of performance requirements for designated use in winter conditions.
Conclusion

The successful harmonization of tyre use in snow conditions is significantly based on the consolidation of definitions for tyre categories across the different UN Regulations as a first step (already in progress) and standardization of performance criteria and markings for all tyre classes (C1, C2, C3) and categories, in a second step.

Also the necessity for consideration of the category retreaded tyres for passenger cars, tyres for motor L-category vehicles and tyres for agricultural vehicles might be assessed.
Summary regarding markings for snow use and categories of tyres

M+S or MS or M.S. or M & S

All tyres of category Snow tyre;
Special use tyre / Professional off-road tyre (POR)
when declared by the tyre manufacturer
but only for R 54, from 09/02/2017\(^1\) and R 30\(^2\), date t.b.d)

M+S or MS or M.S. or M & S and “Alpine" symbol ("3-peak-mountain with snowflake“)

Snow tyre for use in severe snow conditions
(only applicable to R 109 and R 117 but not for special use tyres (e.g. POR, MPT), even though declared by the tyre manufacturer and even if snow performance level can be achieved)

No marking for snow use

All terrain (“AT”) tyres (R 75);
Agricultural tyres (R 106)

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1) ECE/TRANS/WP.29/GRRF/2016/17 considered and adopted at the 169\(^{th}\) session of WP.29
2) ECE/TRANS/WP.29/GRRF/2016/34 submitted by GRRF as draft Supplement 19 to the 02 series of amendments to Regulation No. 30 for the 170\(^{th}\) session of WP.29
Potential solutions for discussion / guidance in GRRF

Possible Solution 1:
Including the definition for „Snow tyre for use in severe snow conditions“ and requirements for snow performance criteria and markings into the UN Regulations 30, 54, 75, and 108, possibly also 106. Regulations 109 and 117 are already updated.

Possible Solution 2:
Opening UN Regulation 117 concerning snow performance criteria for additional classes and categories that are currently out of scope, e.g. Special tyres („POR“ and „MPT“), All terrain („AT“) tyres and retreaded tyres for passenger cars.
Thank you for your attention!

Federal Ministry of Transport and Digital Infrastructure
Invalidenstraße 44
D-10115 Berlin

www.bmvi.de