

Proposal to amend documents ECE/TRANS/WP.29/GRBP/2022/19

The changes are marked in **bold** for added text and **strike through** for deleted text, all in red font.

Table of contents, Annexes, amend to read:

"7 Procedures for snow performance testing relative to ~~snow~~-tyres for use in severe snow conditions...

...

8 Procedures for ice performance testing relative to ice grip tyres of class C1..."

Paragraph 2.1., item (e), amend to read:

" (e) Whether ~~snow~~-tyre for use in severe snow conditions or not;"

Paragraph 2.13.1., amend to read:

"2.13.1. "~~Snow tyre~~**Tyre for use in severe snow conditions**" means a snow tyre **or a special use tyre** whose tread pattern, tread compound or structure is specifically designed to be used in severe snow conditions and that fulfils the requirements of paragraphs 6.4. and 6.4.1. of this Regulation.

2.13.1.1. "*Ice grip tyre*" means a class C1 snow tyre **that is classified as tyre** for use in severe snow conditions ~~that is~~ **and** additionally designed to be used on road surfaces covered with ice and that fulfils the requirements of paragraph 6.4.2. of this Regulation."

Paragraph 3.1.1., amend to read:

"3.1.1. The performance characteristics to be assessed for the type of tyre; "rolling sound emissions level" and/or "adhesion performance level on wet surfaces" and/or "rolling resistance level"; "snow performance level" in case of "~~snow~~ tyre for use in severe snow conditions" and additionally "ice performance level" in case of ice grip tyre;"

Paragraph 3.1.5.1., amend to read:

"3.1.5.1. Whether ~~snow~~-tyre for use in severe snow conditions or not;"

Paragraph 4.2.6., amend to read:

"4.2.6. The "Alpine Symbol" ("3-peak-mountain with snowflake" conforming to the pictogram described in Annex 7, Appendix 1) if the snow tyre **or the special use tyre** is classified as "~~snow~~-tyre for use in severe snow conditions";

4.2.6.1. The "Ice Grip Symbol" (conforming to the pictogram described in Annex 8, Appendix 1) if the ~~snow~~-tyre for use in severe snow conditions is additionally classified as ice grip tyre;

4.2.6.2. **The inscription "M+S" or "M.S" or "M&S" if the special use tyre is classified as tyre for use in severe snow conditions in addition to the "Alpine Symbol";**

Paragraph 6.1.1., footnote below the table of limits for Stage 2, amend to read:

"The above limits shall be increased by 1 dB(A) for **snow tyres that are classified as** "~~snow~~ tyre for use in severe snow conditions", extra load tyres or reinforced tyres, or any combination of these classifications."

Paragraph 6.1.2., table of limits for Stage 2, amend to read:

"

Stage 2		
Category of use	Limit dB(A)	
	Other	Traction tyres
Normal tyre	72	73
Snow tyre	72	73
	Snow tyre that is classified as tyre for use in severe snow conditions	73
Special use tyre	74	75
	Special use tyre that is classified as tyre for use in severe snow conditions	74

"

Paragraph 6.1.3., table of limits for Stage 2, amend to read:

"

Stage 2		
Category of use	Limit dB(A)	
	Other	Traction tyres
Normal tyre	73	75
Snow tyre	73	75
	Snow tyre that is classified as tyre for use in severe snow conditions	74
Special use tyre	75	77
	Special use tyre that is classified as tyre for use in severe snow conditions	75

"

Paragraph 6.2.1., table of limits, amend to read:

"

Category of use	Wet grip index (G)	
Normal tyre	≥ 1.1	
Snow tyre	≥ 1.1	
	" Snow Snow tyre that is classified as tyre for use in severe snow conditions" and with a speed symbol ("R" and above, including "H") indicating a maximum permissible speed greater than 160 km/h	≥ 1.0
	" Snow Snow tyre that is classified as tyre for use in severe snow conditions" and with a speed symbol ("Q" or below excluding "H") indicating a maximum permissible speed not greater than 160 km/h	≥ 0.9
Special use tyre	Not defined	

	Special use tyre that is classified as tyre for use in severe snow conditions	Not defined
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Paragraph 6.2.2., table of limits, amend to read:

Category of use	Wet grip index (G)	
	Other	Traction tyres
Normal tyre	≥ 0.95	≥ 0.85
Snow tyre	≥ 0.95	≥ 0.85
	Snow tyre that is classified as tyre for use in severe snow conditions	≥ 0.85
Special use tyre	≥ 0.85	≥ 0.85
	Special use tyre that is classified as tyre for use in severe snow conditions	≥ 0.85

Paragraph 6.2.3., table of limits, amend to read:

Category of use	Wet grip index (G)	
	Other	Traction tyres
Normal tyre	≥ 0.80	≥ 0.65
Snow tyre	≥ 0.65	≥ 0.65
	Snow tyre that is classified as tyre for use in severe snow conditions	≥ 0.65
Special use tyre	≥ 0.65	≥ 0.65
	Special use tyre that is classified as tyre for use in severe snow conditions	≥ 0.65

Paragraph 6.3.1, last sentence, amend to read:

"For **snow tyres that are classified as "snow tyre for use in severe snow conditions"**, the limits shall be increased by 1 N/kN."

Paragraph 6.3.2, last sentence, amend to read:

"For **snow tyres that are classified as "snow tyre for use in severe snow conditions"**, the limits shall be increased by 1 N/kN."

Paragraph 6.4., amend to read:

"6.4. In order to be classified as a **snow tyre for use in severe snow conditions**" the tyre shall meet the performance requirements of paragraph 6.4.1. below. The tyre shall meet these requirements based on a test method of Annex 7 by which:

- (a) The mean fully developed deceleration ("mfdd") in a braking test,
- (b) Or alternatively an average traction force in a traction test,
- (c) Or alternatively the average acceleration in an acceleration test

of the candidate tyre is compared to that of a Standard Reference Test Tyre (SRTT).

The relative performance shall be indicated by a snow grip index."

Paragraph 6.5.2-6.4.2., amend to read:

"6.4.2. Ice performance requirements for class C1 tyres classified as ice grip tyre

In order to be classified as ice grip tyre, a ~~snow~~-tyre for use in severe snow conditions shall meet the minimum ice grip index value, as calculated in the procedure described in Annex 8 and compared with the respective Standard Reference Test Tyre (SRTT) shall be as follows:

Class of tyre	Ice grip index
	Ref. = SRTT16
C1	1.18

"

Annex 1, item 4.1, amend to read:

"4.1. ~~Snow tyre~~**Tyre** for use in severe snow conditions (Yes/No)²"

Annex 1, Footnote 6, amend to read:

"⁶ In the case of "~~snow~~-tyre for use in severe snow conditions" a test report according to Appendix 2 or Appendix 3, as applicable, to Annex 7 shall be submitted. **Additionally in the case of ice grip tyre a test report according to Appendix 2 to Annex 8 shall be submitted.**"

Annex 3, Appendix 1, item 6.1, amend to read:

"6.1. ~~Snow tyre~~**Tyre** for use in severe snow conditions (Yes/No)¹"

Annex 5, paragraph 3.3., table of temperatures, amend to read:

"

Category of use	Wetted surface temperature	Ambient temperature
Normal tyre tyre	12 °C – 35 °C	12 °C – 40 °C
Snow tyre tyre	5 °C – 35 °C	5 °C – 40 °C
	Snow tyre that is classified as tyre for use in severe snow conditions	5 °C – 20 °C
Special use tyre tyre	not applicable	not applicable
	Special use tyre that is classified as tyre for use in severe snow conditions	not applicable

"

Annex 5, paragraph 4.1.6.4., table 2, amend to read:

"

Table 2

Category of use	g_0 (°C)	a	b (°C ⁻¹)	c (°C ⁻²)	d (mm ⁻¹)
Normal tyre	20	+0.99382	+0.00269	-0.00028	-0.02472
Snow tyre	15	+0.92654	-0.00121	-0.00007	-0.04279

Category of use		ϑ_0 (°C)	a	b (°C ⁻¹)	c (°C ⁻²)	d (mm ⁻¹)
	Snow tyre that is classified as tyre for use in severe snow conditions	10	+0.72029	-0.00539	+0.00022	-0.03037
Special use tyre Special use tyre		not defined				
	Special use tyre that is classified as tyre for use in severe snow conditions	not defined				

"

Annex 5, paragraph 4.2.8.4., table 4, amend to read:

"

Table 4

Category of use		ϑ_0 (°C)	a	b (°C ⁻¹)	c (°C ⁻²)	d (mm ⁻¹)
Normal tyre		20	+0.99757	+0.00251	-0.00028	+0.07759
Snow tyre		15	+0.87084	-0.00025	+0.00004	-0.01635
	Snow tyre that is classified as tyre for use in severe snow conditions	10	+0.67929	+0.00115	-0.00005	+0.03963
Special use tyre Special use tyre		not defined				
	Special use tyre that is classified as tyre for use in severe snow conditions	not defined				

"

Annex 6, Appendix 3, item 6.1, amend to read:

"6.1. ~~Snow tyre~~**Tyre** for use in severe snow conditions (Yes/No)²"

Annex 7, title, amend to read:

"Procedures for snow performance testing relative to ~~snow~~ tyres for use in severe snow conditions"

Annex 8, title, amend to read:

"Procedures for ice performance testing relative to ice grip tyres of class C1"

II. Justification

1. This proposal is aimed to introduce provisions to allow the type approval of special use tyres that fulfil the requirements for snow performance as laid out in Annex 7. The respective marking related to the "Alpine" symbol has been considered for those tyres complying with these requirements.

2. Based on preliminary technical assessment submitted through informal document GRBP-71-26 allowances for rolling sound emission and rolling resistance could be needed for special use tyres that are classified as tyres for use in severe snow condition. However,

special use tyres that are classified as tyres for use in severe snow condition currently do not exist. Therefore, in this document allowances for rolling sound emission and rolling resistance are not proposed considering that the performance of such tyres cannot be assessed until are they developed.
