

EU Tyre Labelling Regulation 1222/2009

Industry Guideline on tyre labelling to promote the use of fuel-efficient and safe tyres with low noise levels

Version 3

Regulatory / Technical Questions

Q1: What is the aim of the tyre labeling regulation?

A1: The goal is to improve the safety, the economic and environmental efficiency of road transport by promoting fuel-efficient and safe tyres with low noise levels. This Regulation allows end-users to make more informed choices when purchasing tyres by considering this information along with other factors normally considered during the purchasing decision process.

Q2: What are the proposed tyre labelling rules about?

A2: The rules prescribe that information on certain characteristics of tyre performances will have to be communicated to consumers. This information will relate to:

- The impact on vehicle fuel efficiency associated to the tyre's **rolling resistance**
- The impact on vehicle safety associated to the tyre's **wet grip**
- The tyre's external **noise** level (expressed in decibels); not any tyre noise heard inside the vehicle

This information needs to be provided concerning passenger car tyres, light truck tyres and heavy duty vehicle tyres.

Q3: Do all tyres fall under the scope of the Regulation?

A3: The rules apply only to passenger car tyres (C1), light commercial vehicle tyres (C2) and heavy commercial vehicle tyres (C3).

The following categories are excluded from the scope:

- o Retreaded tyres
- o Professional Off Road tyres
- o Racing tyres
- o Studded tyres (studdable tyres if supplied without studs are covered)
- o Temporary use spare tyres
- o Tyres designed to be fitted on vehicles registered for the first time before 1 October 1990
- o Tyres whose speed rating is less than 80 km/h
- o Tyres whose nominal rim diameter does not exceed 254 mm or is 635 mm or more

Q4: When will these labelling rules apply?

A4: Rules will apply 1 November 2012 for all passenger car, light and heavy commercial vehicles tyres produced from 1 July 2012 (Date of Production Code "2712")

Q5: Who should give the information to the consumer?

A5: Three players have a number of obligations to ensure consumers are informed: (1) the tyre suppliers (manufacturers or importers in Europe); (2) the retailer; (3) the vehicle manufacturers

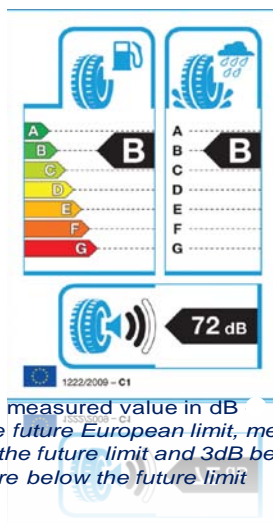
1. **Tyre suppliers** have to give this information in the following way:
 - For passenger car, light truck and truck tyres the information must be available in technical promotional literature (leaflets, brochures, etc), including the manufacturer website
 - For passenger and light truck tyres, the manufacturers or importers have the choice of either putting a sticker on the tyre tread or a label accompanying each delivery of batch of tyres to the dealer and to the end consumer
2. **Retailers (at point of sale):**
 - Must ensure tyres which are visible to consumers at the point of sale carry a sticker or have a label in their close proximity which is shown to the end user before the sale
 - Must give the information during the purchase process when the tyres offered for sale are not visible to the end-user
 - Must give the information on or with the bill
3. **Vehicle suppliers & distributors:**
 - Must declare the tyre wet grip and fuel efficiency class and external rolling noise measured value of the tyre type(s) that are offered in option, when different from those fitted normally on the basic vehicle.
 - As soon as the customer is given a choice either in the size / type of tyres fitted on the basic rim or a choice of rim and tyre size, the labelling information must be provided before sale.
 - There might be no obligation to provide information only in those cases where there is a choice of rim with tyres types and sizes that are strictly identical to those which are sold automatically with the new vehicle.

Q6. How must the information be given to the consumers?

A6. The information on the three characteristics of the tyre is given through a system of grading

Fuel efficiency class:

Even though the results may vary according to vehicles and weather conditions, the difference between class G and class A for a complete set of tyres can reduce fuel consumption by 7,5%** and even more for trucks*



Wet Grip class:

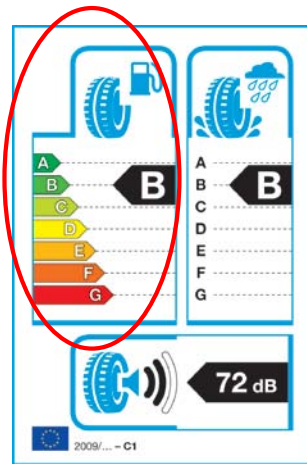
Even though the results may vary according to the vehicles and weather conditions, in case of full braking, the difference between class G and A for a full set of tyres can be a 30% shorter braking distance (for example for a car driving 80 km/h, this may represent a shorter braking distance of 18m)**.*

external rolling noise: the measured value in dB
 • 3 black waves= above the future European limit, meaning noisier,
 • 2 black waves= between the future limit and 3dB below, meaning average tyre,
 • 1 black wave= 3dB or more below the future limit

Q7: Are there any instructions concerning the size of the label/sticker?

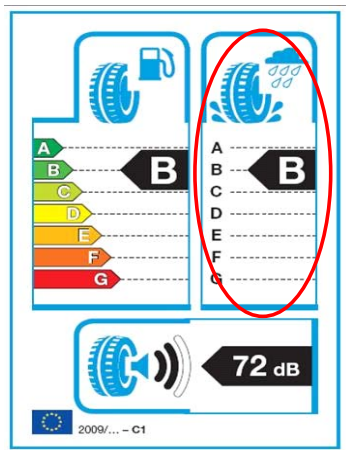
A7: Tyre suppliers do not have the freedom to decide on the size of the label. The label has a defined size (minimum width of 7,5 cm and height of 11 cm). Also, the colors and design of the label cannot be changed. Tyre suppliers also have limits on the space available to give brand information (trade name, tyre line, tyre dimension, load index, speed rating and other technical specifications). The total surface of the sticker cannot exceed 250cm² and the sticker cannot be longer than 22 cm.

Q8: What are the values behind the rolling resistance grading?
 The values are obtained by applying a harmonized testing method



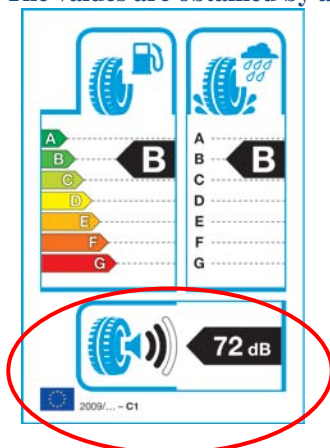
Passenger car C1 Tyres		Light Truck C2 Tyres		Truck & Bus C3 Tyres	
RRC in kg/t	Energy Efficiency class	RRC in kg/t	Energy Efficiency class	RRC in kg/t	Energy Efficiency class
$RRC \leq 6,5$	A	$RRC \leq 5,5$	A	$RRC \leq 4,0$	A
$6,6 \leq RRC \leq 7,7$	B	$5,6 \leq RRC \leq 6,7$	B	$4,1 \leq RRC \leq 5,0$	B
$7,8 \leq RRC \leq 9,0$	C	$6,8 \leq RRC \leq 8,0$	C	$5,1 \leq RRC \leq 6,0$	C
Empty	D	Empty	D	$6,1 \leq RRC \leq 7,0$	D
$9,1 \leq RRC \leq 10,5$	E	$8,1 \leq RRC \leq 9,2$	E	$7,1 \leq RRC \leq 8,0$	E
$10,6 \leq RRC \leq 12,0$	F	$9,3 \leq RRC \leq 10,5$	F	$RRC \geq 8,1$	F
$RRC \geq 12,1$	G	$RRC \geq 10,6$	G	Empty	G




Q9: What are the values behind the wet grip performances?
 The values are obtained by applying a harmonized testing method



Passenger car C1 tyres		Light Truck C2 tyres		Truck & Bus C3 tyres	
G	Wet grip class	G	Wet grip class	G	Wet grip class
$1,55 \leq G$	A	$1,40 \leq G$	A	$1,25 \leq G$	A
$1,40 \leq G \leq 1,54$	B	$1,25 \leq G \leq 1,39$	B	$1,10 \leq G \leq 1,24$	B
$1,25 \leq G \leq 1,39$	C	$1,10 \leq G \leq 1,24$	C	$0,95 \leq G \leq 1,09$	C
Empty	D	Empty	D	$0,80 \leq G \leq 0,94$	D
$1,10 \leq G \leq 1,24$	E	$0,95 \leq G \leq 1,09$	E	$0,65 \leq G \leq 0,79$	E
$G \leq 1,09$	F	$G \leq 0,94$	F	$G \leq 0,64$	F
Empty	G	Empty	G	Empty	G

Q10: What are the values behind the noise values?
 The values are obtained by applying a harmonized testing method



-  = when tyre is 3dB(A) less than the future limits of 661/2009
-  = meets 661/2009 limits that will apply in the future
-  = current 2001/43 limits

Q11: What is the status of the tests procedures for noise, rolling resistance and wet grip ?**A11.**

Noise test for the purpose of labelling (as well as for type approval), is already well established and is to be performed in accordance with UNECE Reg.117 (same as EU Directive 92/23/EEC).

Rolling Resistance test procedure:

- A) the test is performed in accordance with UNECE Reg.117.02 (referring to ISO28580 standard), but such value is useful for type approval purpose only
- B) to obtain the labelling class, such value shall be corrected according to the alignment procedure as per EU Commission Reg 1235/2011¹ amending Reg. 1222/2009.

Wet grip test methods:

Industry closely worked with the EU Commission for the introduction of new test methods aimed to satisfy the Wet Grip Grading introduction. In details:

- for C1 tyres the test method is contained into EU Commission Reg.228/2011 amending EU Reg.1222/2009;
- for C2 and C3 tyres the test method is contained into EU Commission Reg. 1235/2011 (referring to ISO15222 standard) amending EU Reg.1222/2009.

In summary, test methods are:

	Test method concept	Type Approval 661/2009			Labelling 1222/2009		
		C1	C2	C3	C1	C2	C3
Rolling Resistance	Indoor Method (machine test)	UNECE R117.02 (ISO 28580:2009 w/o §10)			UNECE R117.02 + EC Alignment procedure		
Wet Grip	Outdoor method ; the wet braking is measured vs a reference tyre by vehicle or trailer	UNECE R117.02	No Requirement		EU Reg.228/2011	ISO15222:2011 EU Reg 1235/2011	
Noise	Outdoor pass-by	UNECE R117.02					

Q12. How will industry deal with differences between machines testing rolling resistance coefficient (RRC) or wet grip (e.g. Driver, testing tracks) ?

A12. **For RRC** (indoor test method), the test method incorporates a system for laboratory alignment, including the establishment of a network of Reference Labs for alignment purposes.

For Wet Grip, which is defined by a „relative“ test method, the labelling value is expressed as a percentage of the performance of a reference tyre, tested under the same conditions; such ratio is supposed to be invariant with respect to different testing tracks.

¹ Published 30 November 2011

Q13. When do Tyre Manufacturers plan to label tyres ?

A13 EU Regulation 1222/2009 requires the labels by 1st of November 2012 and at least for tyres produced after 30 June 2012. Early implementation of tyre labelling is possible once the application details of wet grip and rolling resistance test methods have been defined and however **not before** 30 May 2012 (as per Commission regulation 1235/2011).

Each tyre manufacturer will have the possibility to apply the label within this framework and the timing for implementation could also be guided by the introduction into the EU market of new products lines (new tyre types).

Q14. What is the current performance level of tyres in terms rolling resistance coefficient, wet grip and noise? If not yet available, when will we have an estimation?

A14. Proper evaluation of product performance level would be possible only once the specific test methods for labelling purpose (specifically for RRC and Wet Grip) will be fully consolidated and approved by the relevant bodies. A tyre industry team is working with EU Commission and other bodies in the definition of remaining test method details (e.g. RR alignment). The availability of completed methods is linked to the legislative process. The availability of all test methods is expected within 2011. Once the methods are finalized, each manufacturer will be responsible individually.

Q15. Will there be a coordinated marketing, communication in newspapers, television, radio .. ?

A15. There will be no marketing information from ETRMA; marketing information is entirely up to individual companies to decide and communicate.

If there is any general common information, it will be available through ETRMA and its national associations' websites.

Q16. Is it planned to create an industry database?

A16. There is no intention to create a joint database. This is not required by the European legislation.

Q17. Will the tyre sidewall have to change (marking) due to the new regulations?

A17. **For the purpose of Labelling** (EU Regulation 1222/2009), **no tyre marking** modification is required. For the **purpose of EU Regulation 661/2009**, there will be new type approval markings plus possibly for certain tyre application some new tyre sidewall indication may be required. The marking details are defined into UNECE Reg.117.02.

Q18: What is rolling resistance (RR)?

A18: RR is a force acting opposite to the travel direction if a tyre is rolling. Due to the vehicle load, the tyre is deformed in the contact area with the road surface. This deformation induces internal losses, same as a rubber ball falling down that does not rebound as high as it was launched.

Tyre RR can be expressed as a Force (Newton) or as a Coefficient (RRC). The rolling resistance coefficient is defined as RR force (N) divided by the tyre load (kN). The advantage of the coefficient is that it allows easier comparison of tyres designed to be fitted on different cars.

Q19: How does RR contribute to vehicle fuel consumption? What other factors contribute to fuel consumption?

A19: The vehicle engine has to provide a force to compensate RR. This consumes some fuel and so contributes to the vehicle fuel consumption. As a rule of thumb, reducing RR by 6% decreases fuel consumption by 1% for passenger cars.

Many other factors contribute to vehicle fuel consumption: Aerodynamics, vehicle weight, type of engine, auxiliary systems like air-condition, slope of the road, personal driving style, tyre pressure level, accelerations or general traffic conditions.

Q20: What is the relationship between wet grip and RR?

A20: There are many different tyre characteristics that affect tyre RR. Adjusting the RR can be done by modifying certain of these parameters, but some of them can also have a negative impact on wet grip. The tyre development engineer must use the right tools in the right amount to achieve the optimum balance for RR and wet grip. If tyre RR limits are lowered too far, the required tradeoffs could adversely affect the wet grip performance.

Q21: How is the measured wet grip linked to road safety especially when it comes to different road conditions (dry, wet, snowy, icy)?

A21: Wet grip refers to the safety performance of tyres: it reflects the capacity of a tyre to brake on a wet road. There are other parameters which are relevant for safety (e.g. road holding ability, directional control, deceleration ability on wet and dry surfaces at higher speed and aquaplaning behaviour) but wet grip was chosen as the most representative situation of reduced adherence in Europe

Q22: What is the difference between limit and grading?

A22: A limit is the minimum acceptable performance level for a tyre to be authorized on the European market; A grading will give the performance level under defined testing conditions of the tyre on its rolling resistance, its braking on wet surface and its external rolling noise

Q23: How is the compliance with the tyre label regulation secured?

A23: It is the responsibility of the national market surveillance authorities to assess the conformity of the declared grading values. The procedures for verification are detailed under Annex IV of EC regulation 1235/2011.

Q24: Why are „POR“-tyres excluded from labelling?

A24: POR tyres are specially designed to reach exceptional adherence performances in poor conditions and in all terrain, which does not allow them to fulfil regulatory thresholds and significant grading levels

Q25: Are there any plans to include retreads?

A25: There are plans to introduce labelling requirements to retreads; however this will be decided after an impact assessment is performed by the Commission. The Commission shall present the result of this assessment by no later than March 2016

Q26: Are there any plans to issue an EU-fuel savings calculator showing the impact of differently labelled tyres on fuel consumption/fuel spending?

A26: The European Commission shall start work to develop a harmonised fuel saving calculator which could eventually be posted on each manufacturers' websites, to calculate fuel savings and compare products

Q27: Is wet grip grading comparable between summer and winter tyres?

A27: Yes, but the tyre performance should be judged with actual usage condition (summer conditions vs. winter conditions). Compared to the normal tyres, snow tyres may have different pattern design including sipes / blades and the temperatures of use are different.
Therefore winter tyres have to be considered as a different category and do have slightly different testing result calculation methodology to take into account such differences in design.

Q28: Why wet grip in winter tyres seems generally worse than in summer tyres?

A28: Snow tyres generally use a special compound that is developed to provide the best performance at temperature use conditions lower than those of summer tyres. Hence, the tyre performance should be always judged considering the actual usage condition: while providing still good wet performances, some snow tyre may appear less performing on wet surfaces because designed to maximize the performances on snow surfaces.

Q29: As a retailer, can I sell my tyres in stock after Nov 1st, 2012 without label information?

A29: Only the tyres in stock produced before July 2012 (thus with Date of Production Code earlier than 2712) can be sold after Nov 1st, 2012, without the label. For any other tyre in stock produced from July 2012 onwards, the retailer should secure the availability of the label information before selling the tyre from Nov 1st 2012 which shall be delivered by the tyre supplier. Moreover, certain tyres are excluded from the regulation (refer to Q3) and can be sold without the label.

Q30: Has the Tyre Industry developed a common view how to respond and communicate to outside questions raising the differences in tyre grading of a same tyre?

A30: This is the responsibility of each tyre manufacturer and/or importer.

Q31: What is the strategy to communicate with magazines, journalists from Tyre Industry ?

A31: It is not part of ETRMA remits.