

Strengthening Tyre Limits

Informal doc GRB 62-11-Rev.1

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Ministry of Infrastructure and the Environment

The Netherlands

GRB 64, 5-7 September 2016



M+P | MBBM group
www.mplusp.eu

Prepared for:
132nd Motor Vehicles Working Group meeting
agenda item 5, Brussels, 5 July 2016

Transmitted by the expert from the Netherlands

Statistics of tyre label values in relation to the limit values in EC/661/2009

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Erik de Graaff

Client: Netherlands Ministry of
Infrastructure and Environment



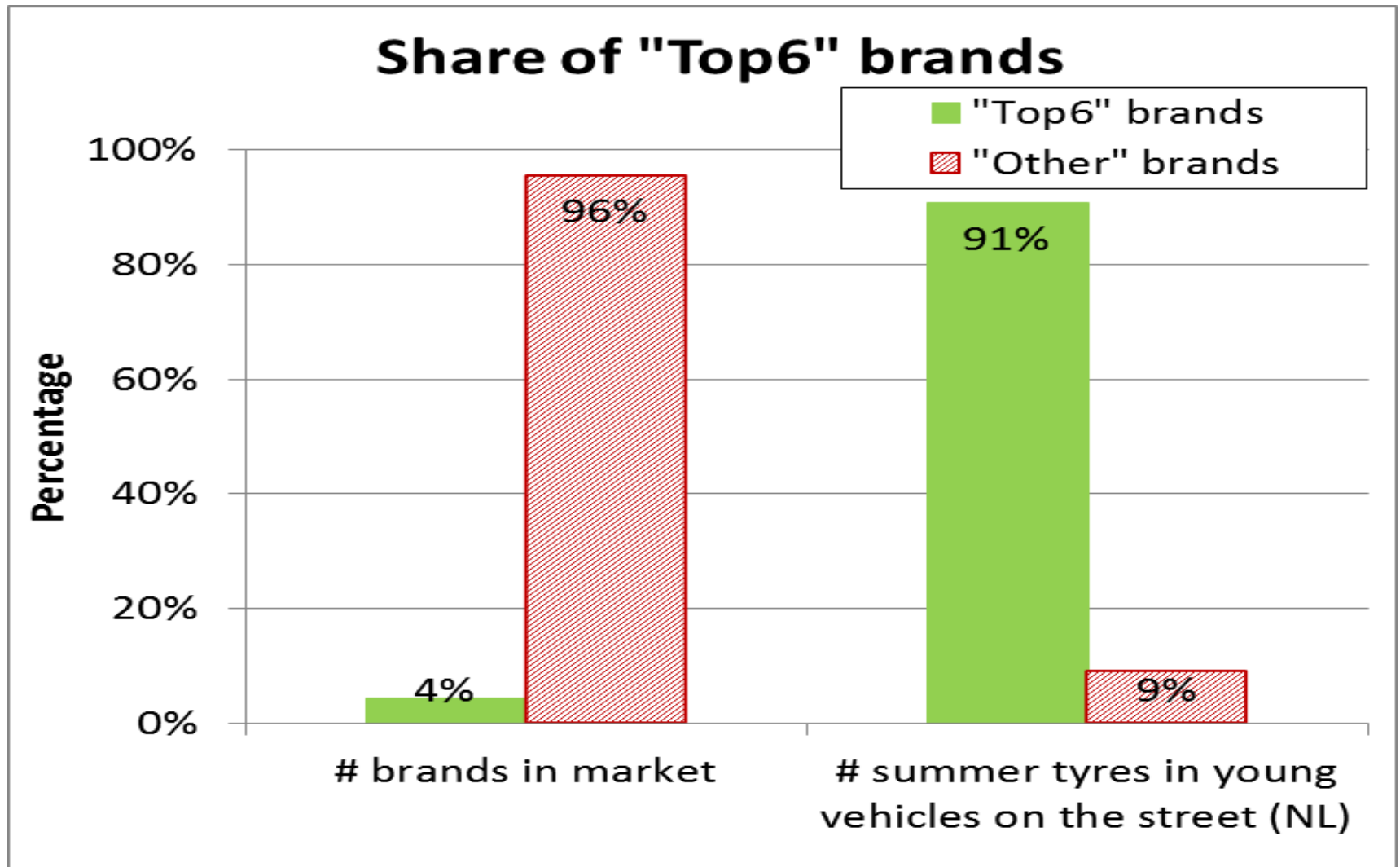
Question of the ministry

- What is the actual tyre performance relative to:
 - the EC/661/2009 limits and
 - the EC/1222/2009 tyre label classes

Workplan

- Collect statistical analysis of tyre label data
- Data source: VACO database (Netherlands tyre branch organisation)
- C1, C2 and C3 tyres; summer, winter and special
- subset of top 7 brands and top 7 sizes
 - Pro:
 - Representing 90% of the tyres sold in the Netherlands
 - Good correlation with performance in the street
 - Good correlation with OEM tyres and premium tyre brands
 - Stable data set for multi year evaluation
 - Con:
 - B and C brands are not very well represented
 - This was thought acceptable as the current tyre limits apply earlier for “OEM” tyres compared to “all” tyres

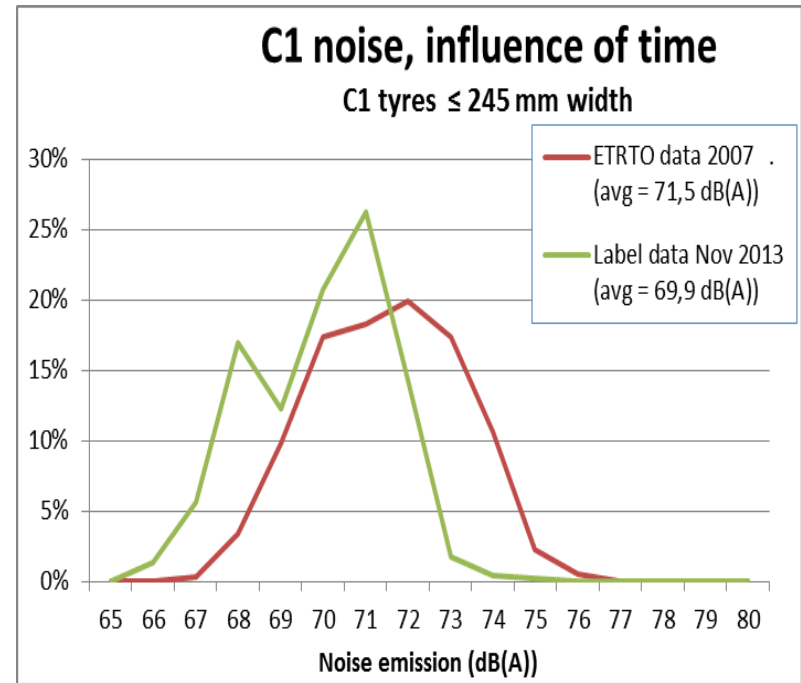
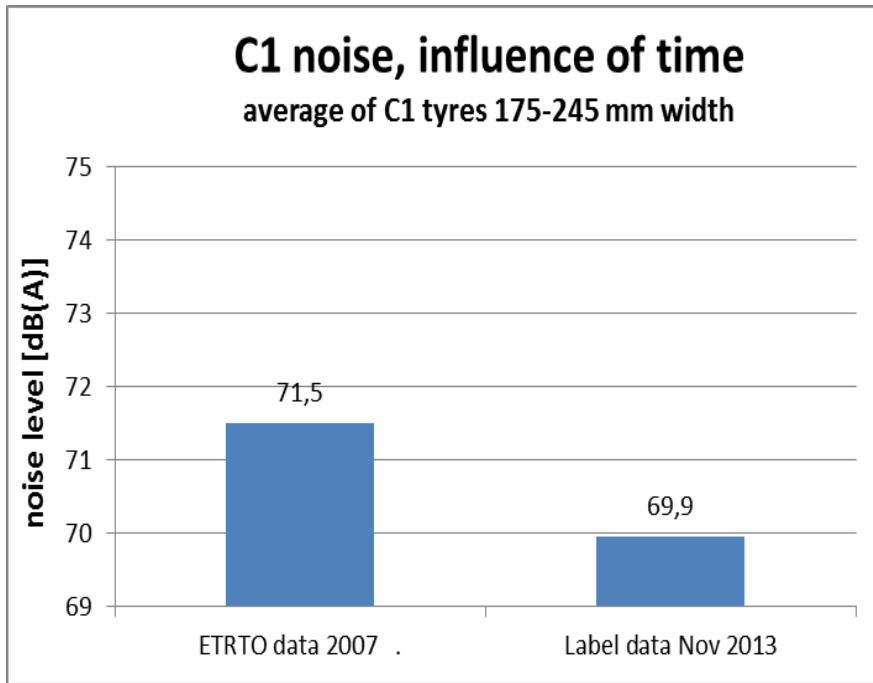
Note: Representativity of a top 6



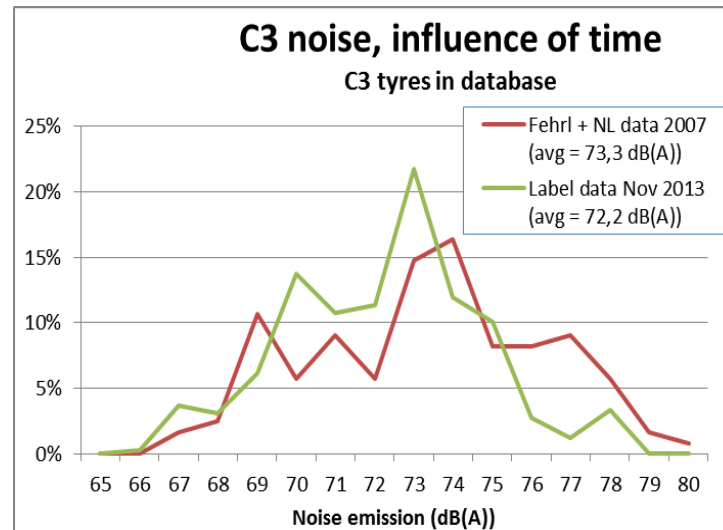
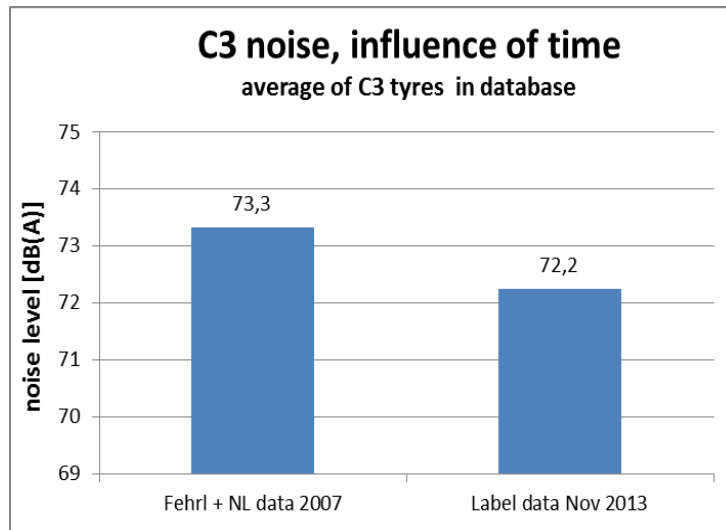
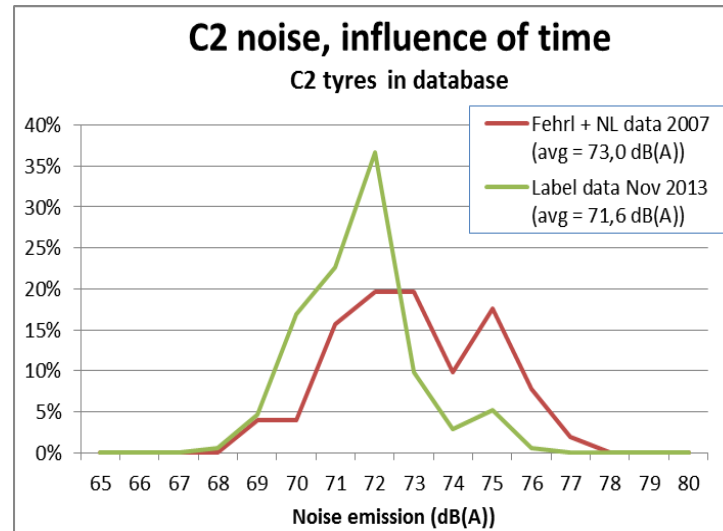
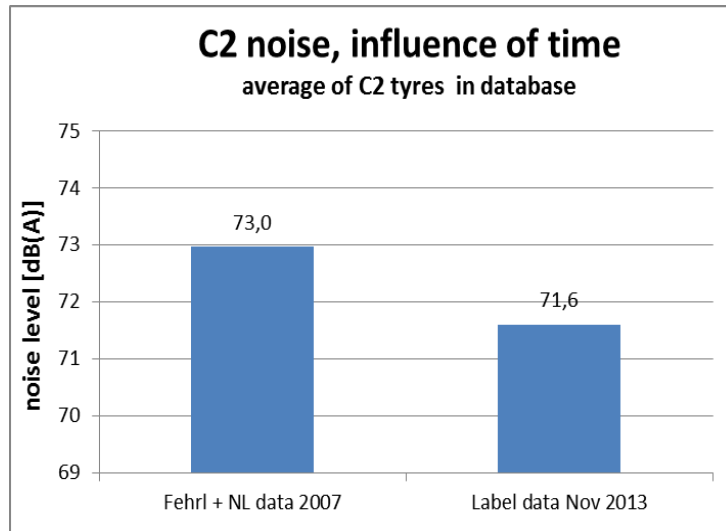
Results

- Trends
 - 2007-2013 (Noise only)
 - 2013-2016 (RR, WG and Noise)
- Statistics 2016

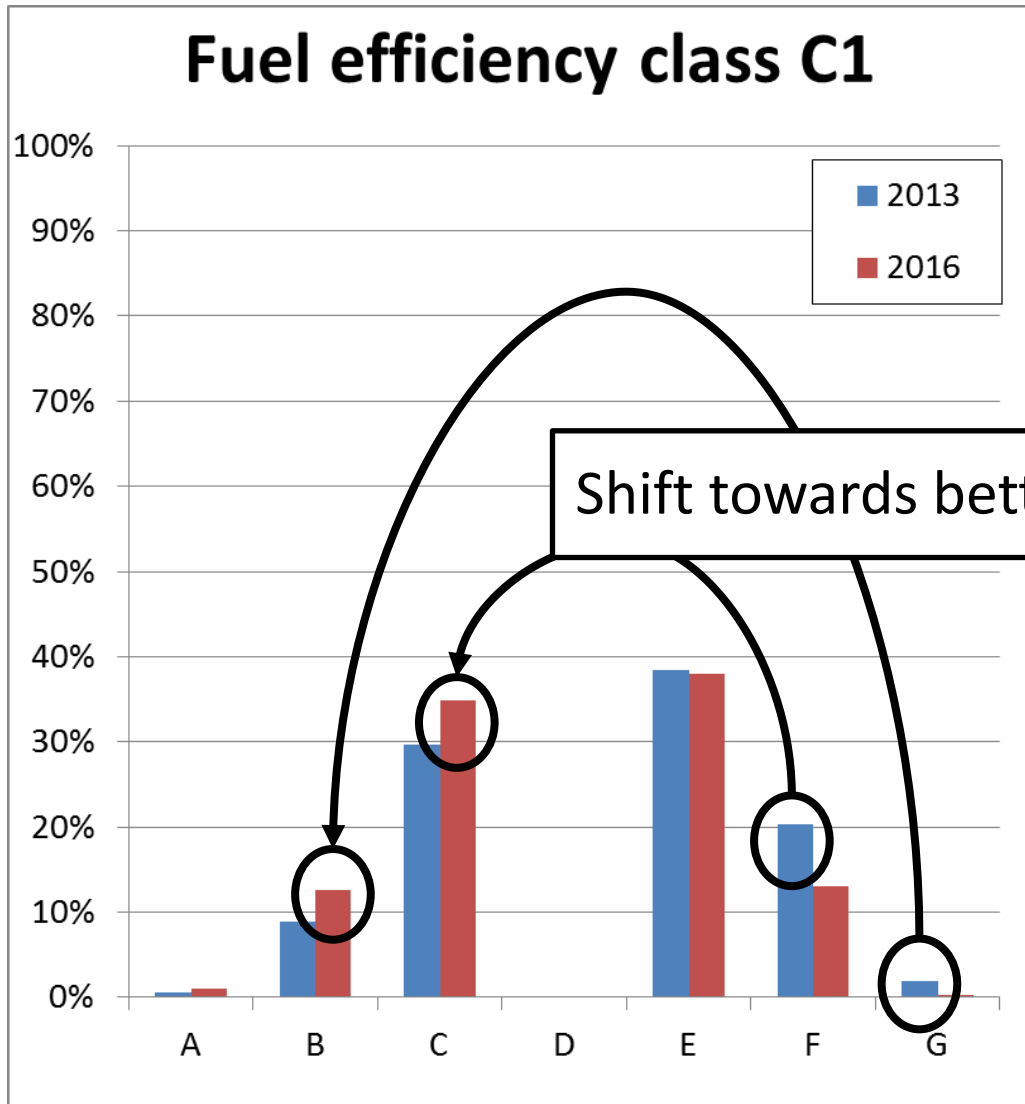
Noise of C1 tyres: 2007 vs. 2013



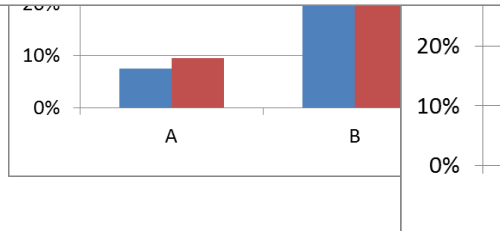
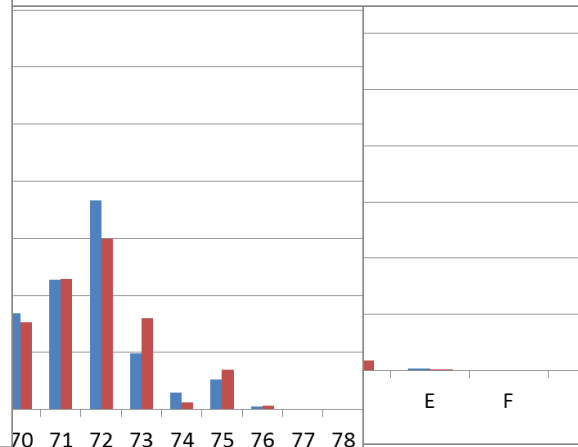
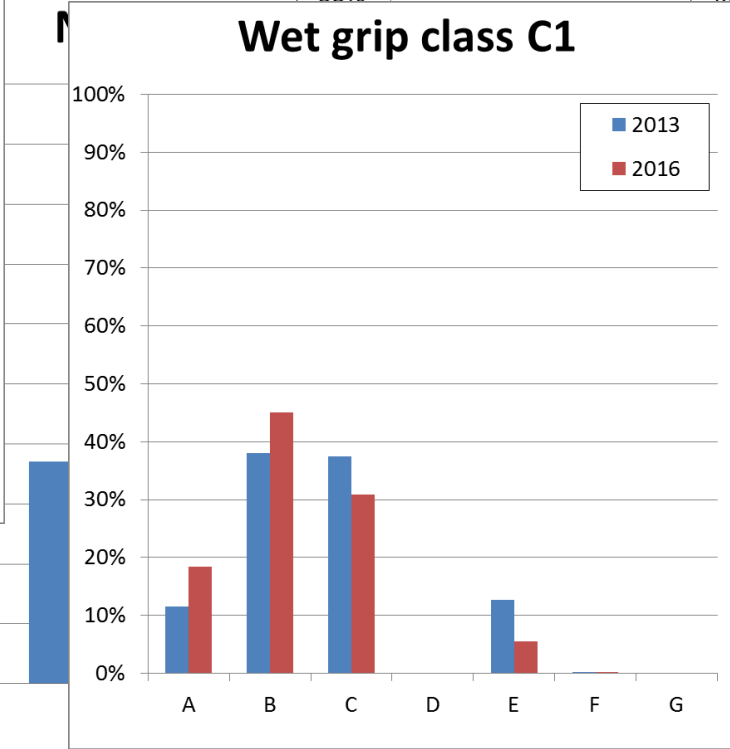
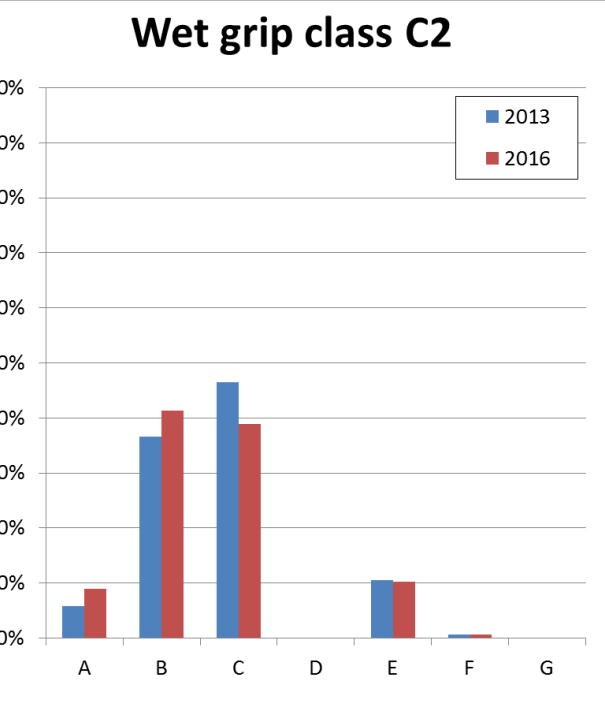
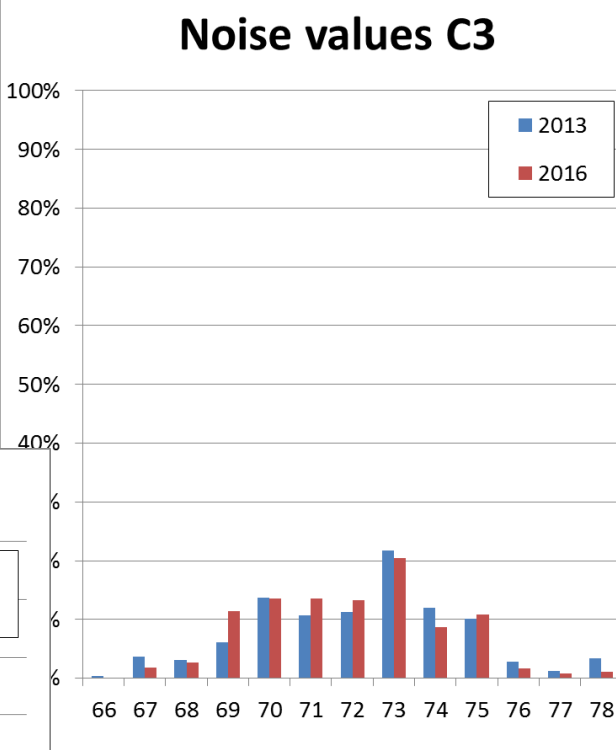
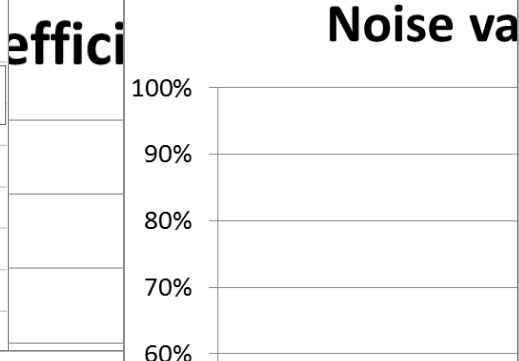
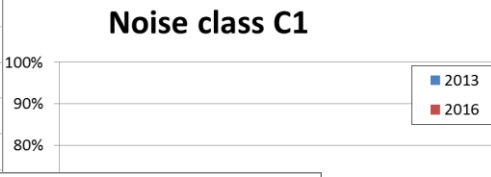
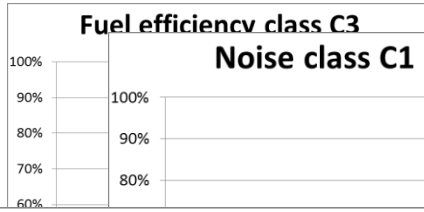
Noise of C2 and C3 tyres: 2007 vs. 2013



Trends 2013-2016



Trends 2013-2016



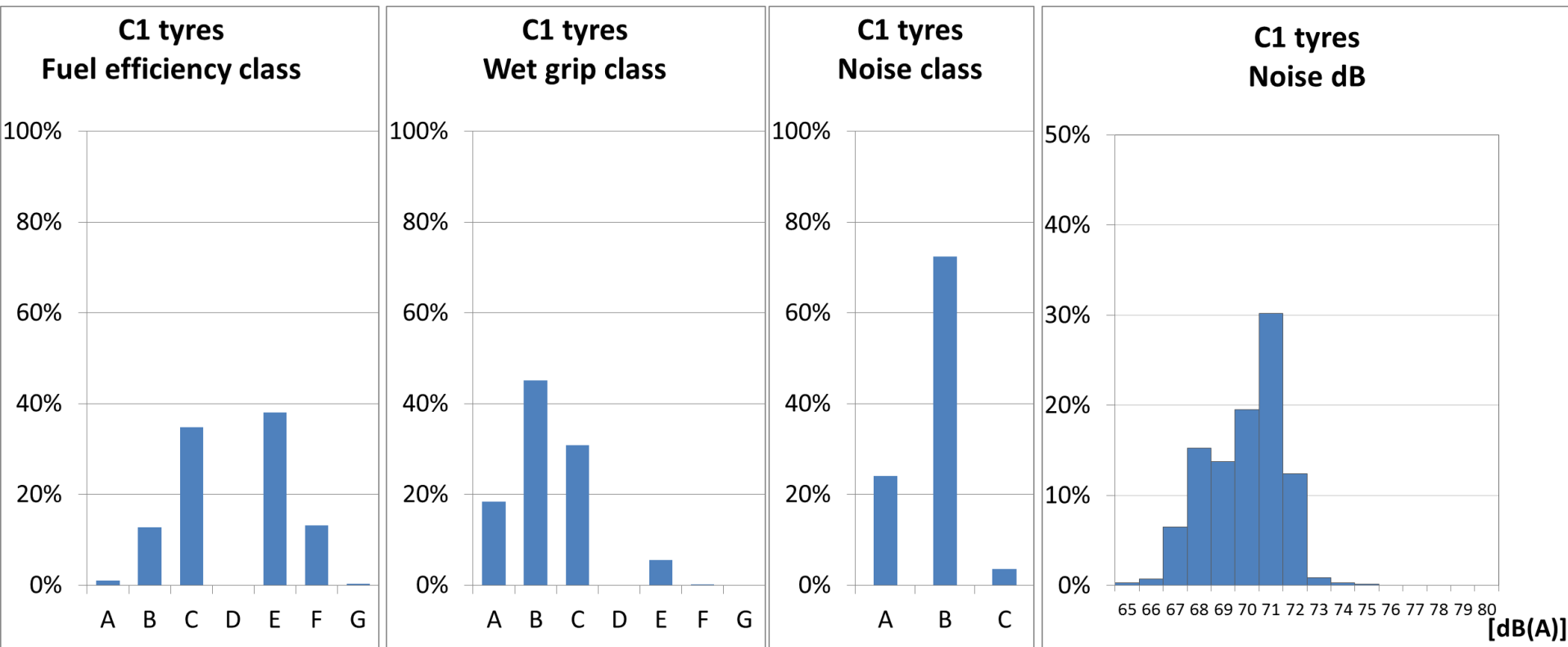
Trends 2013-2016

		2013	2016	
		avg	avg	delta
C1	RR	4,4	4,0	0,3
	WG	2,6	2,3	0,4
	Noise	1,9	1,8	0,1
	dB	69,9	69,7	0,2
C2	RR	4,3	4,1	0,2
	WG	2,7	2,6	0,1
	Noise	2,0	1,9	0,1
	dB	71,6	71,2	0,4
C3	RR	3,7	3,6	0,2
	WG	2,5	2,5	0,1
	Noise	1,8	1,6	0,1
	dB	72,2	71,9	0,3

Consistent trend for better performance in all aspects/classes

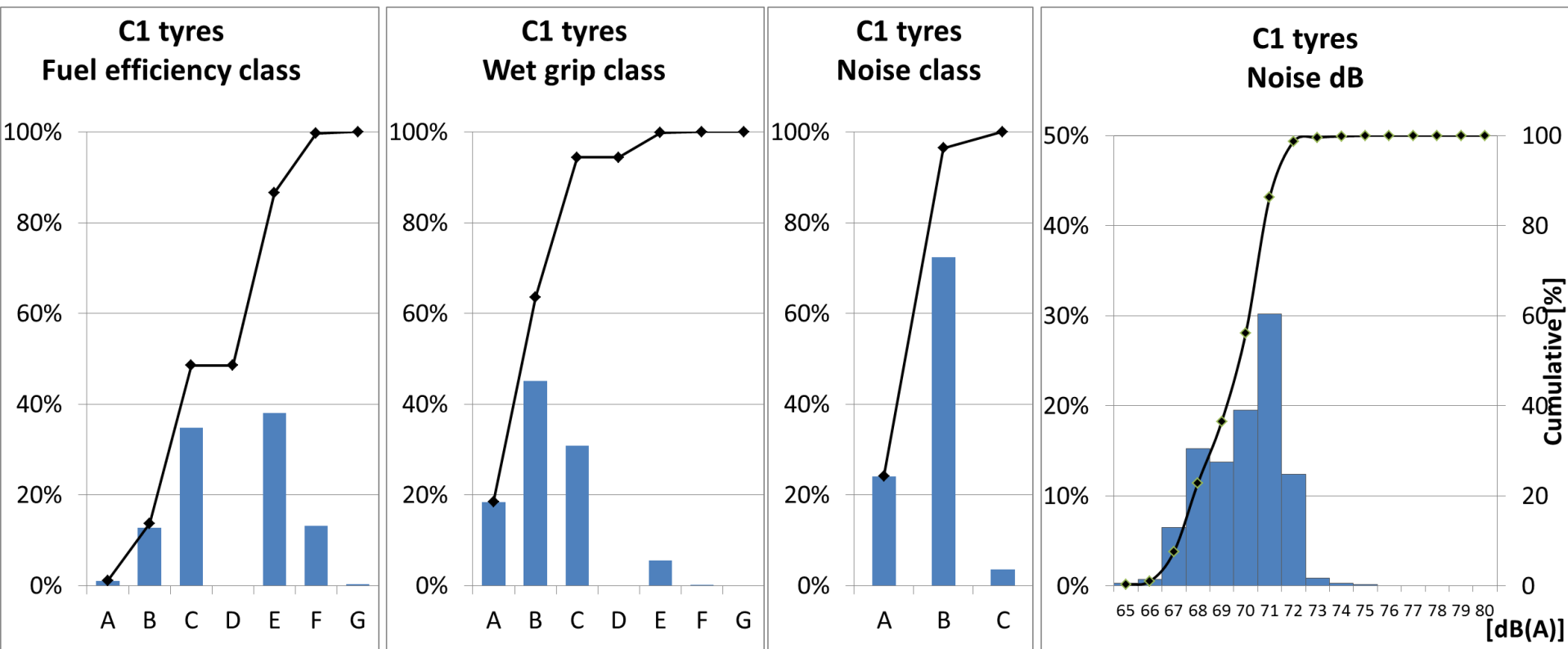
2016 Statistics C1 tyres

- Blue bars: percentage per label class



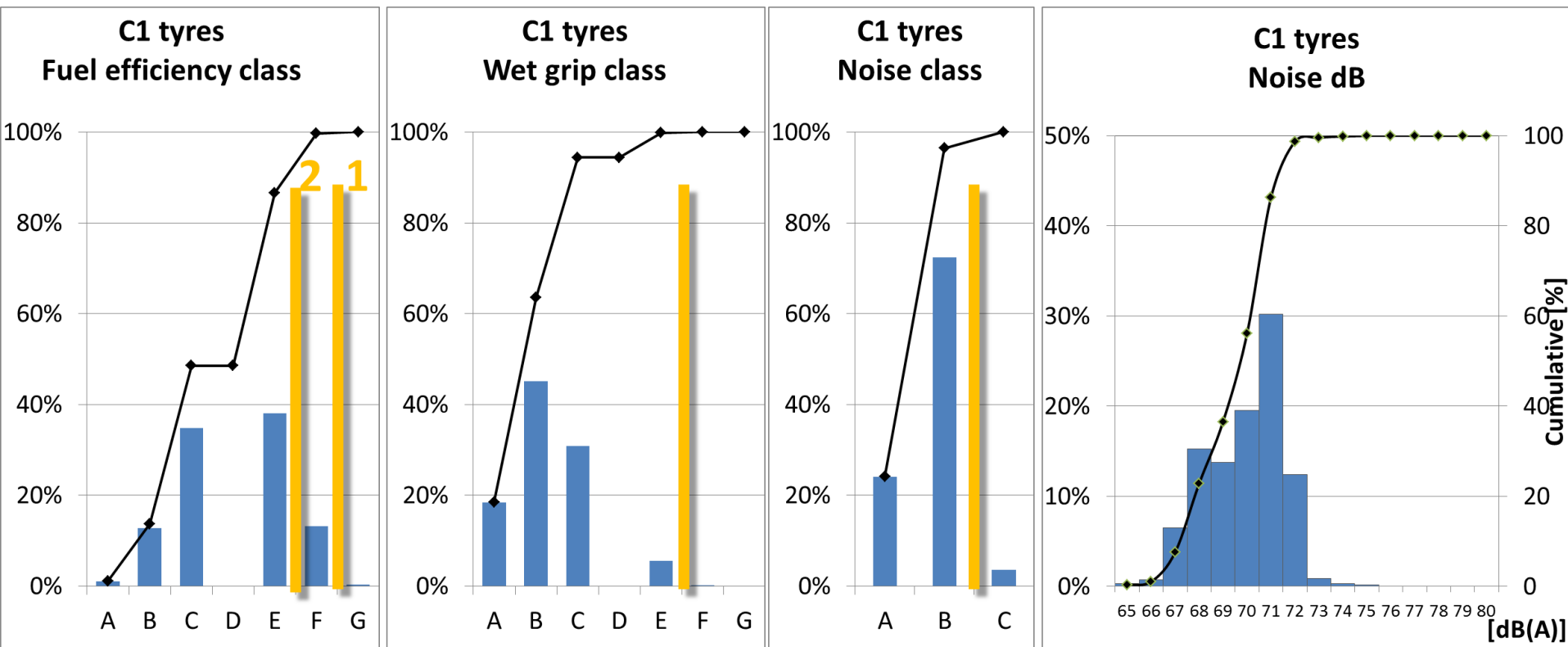
2016 Statistics C1 tyres

- Blue bars: percentage per label class
- Black lines: cumulative percentage

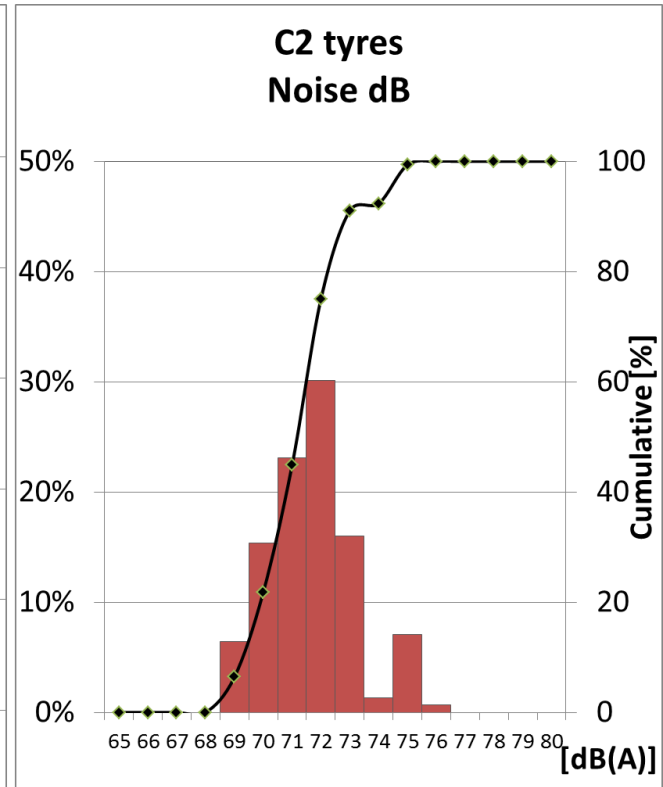
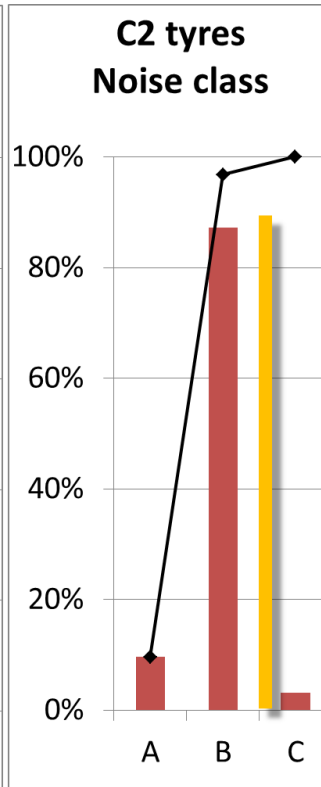
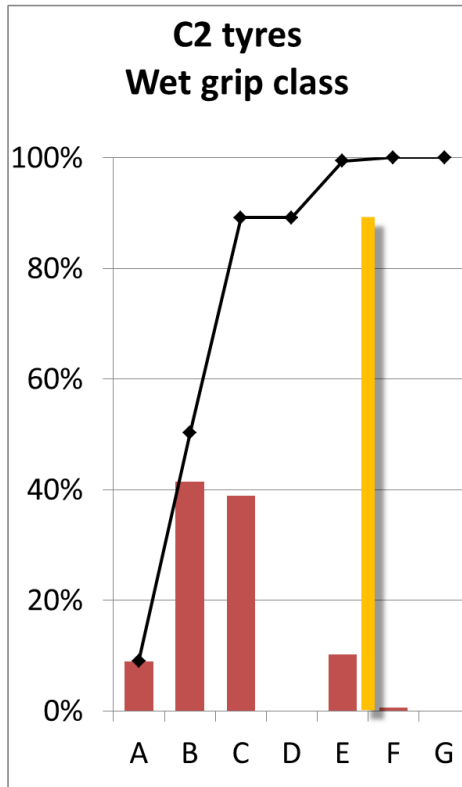
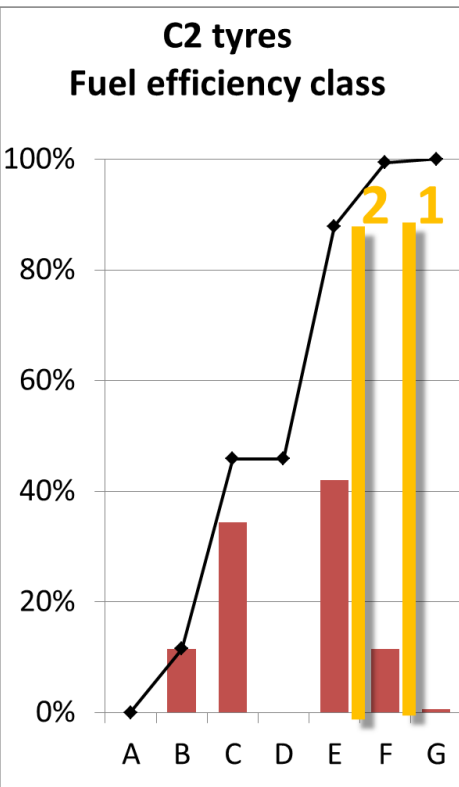


2016 Statistics C1 tyres

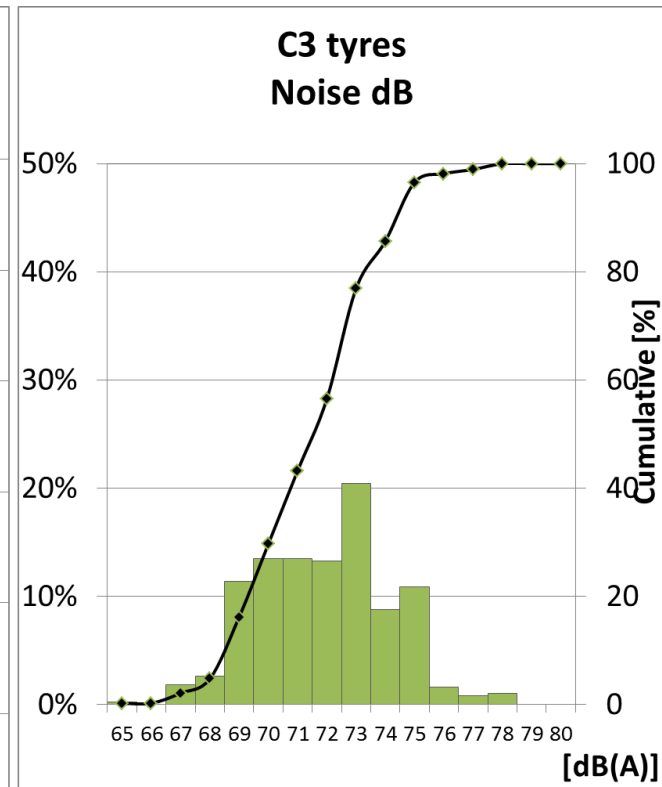
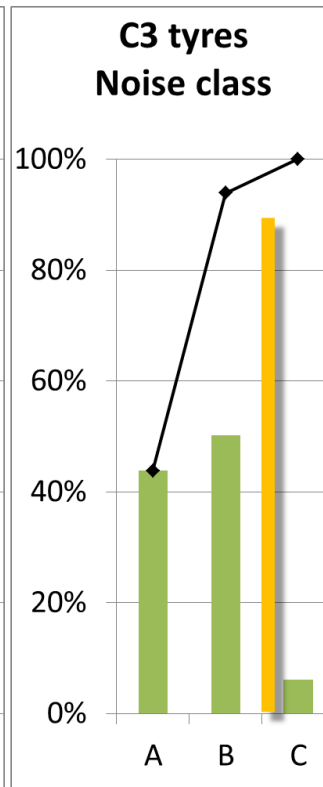
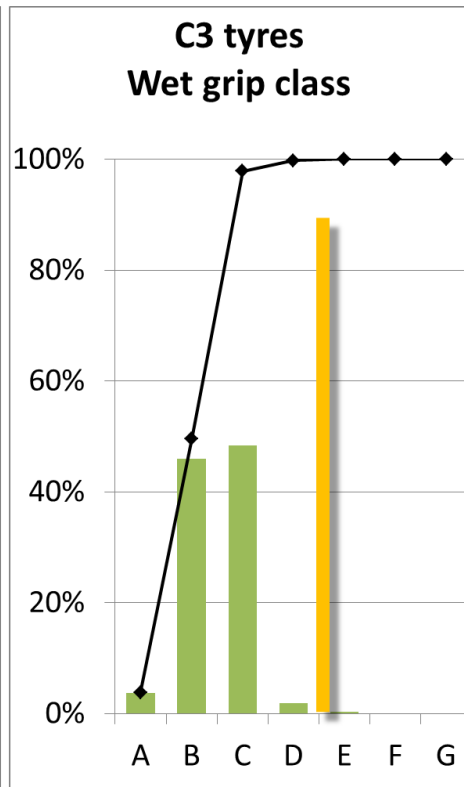
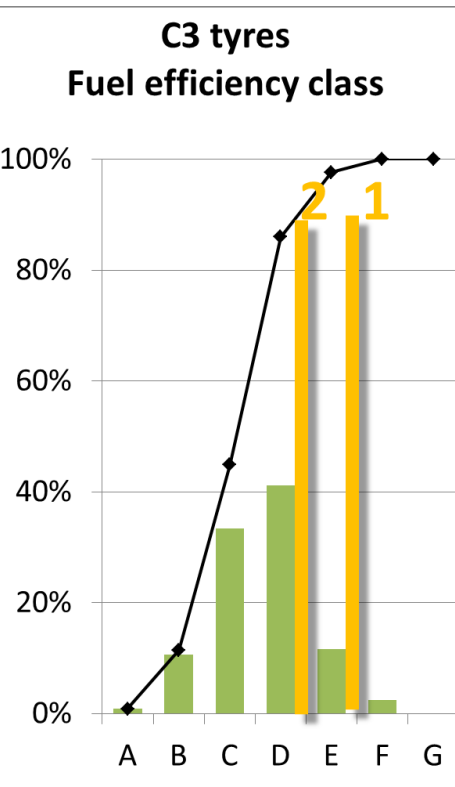
- Blue bars: percentage per label class
- Black lines: cumulative percentage
- Orange lines limit value EC/661/2009 (phase 1 and 2)



2016 Statistics C2 tyres

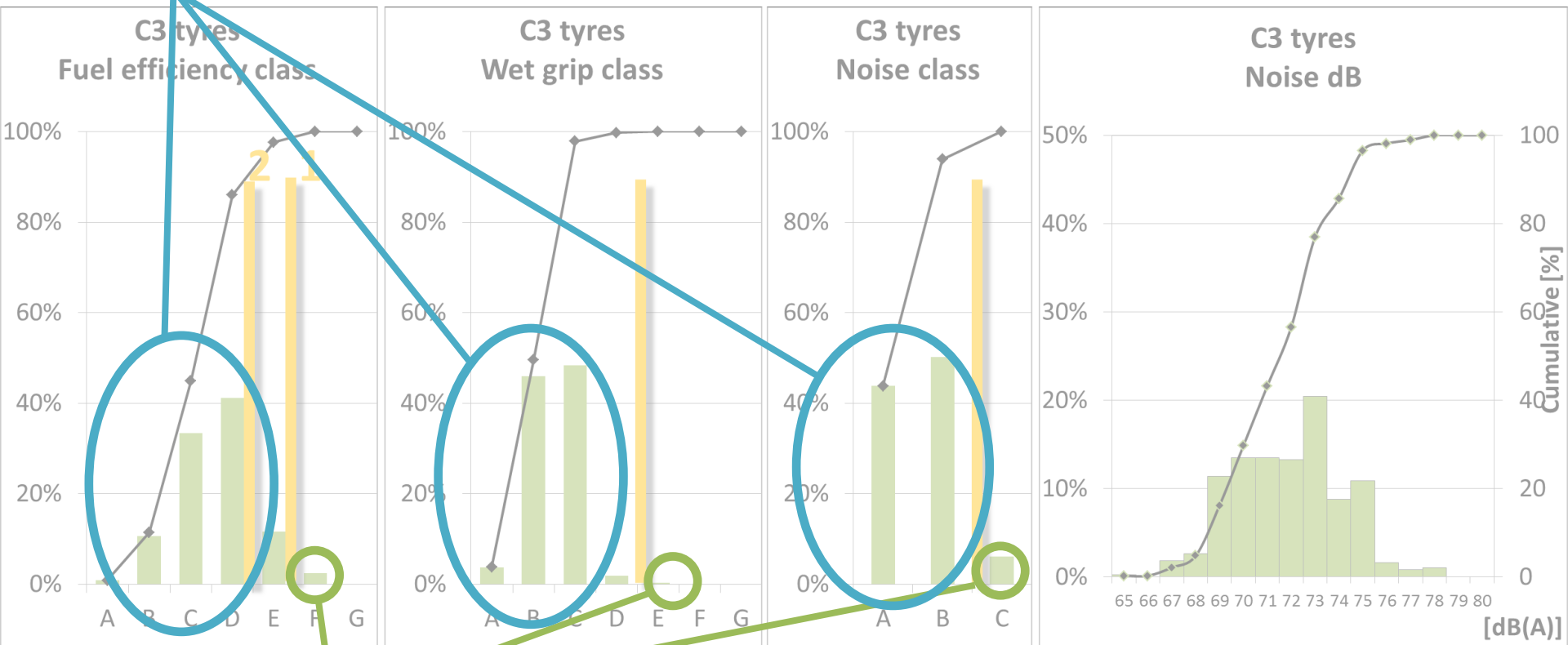


2016 Statistics C3 tyres



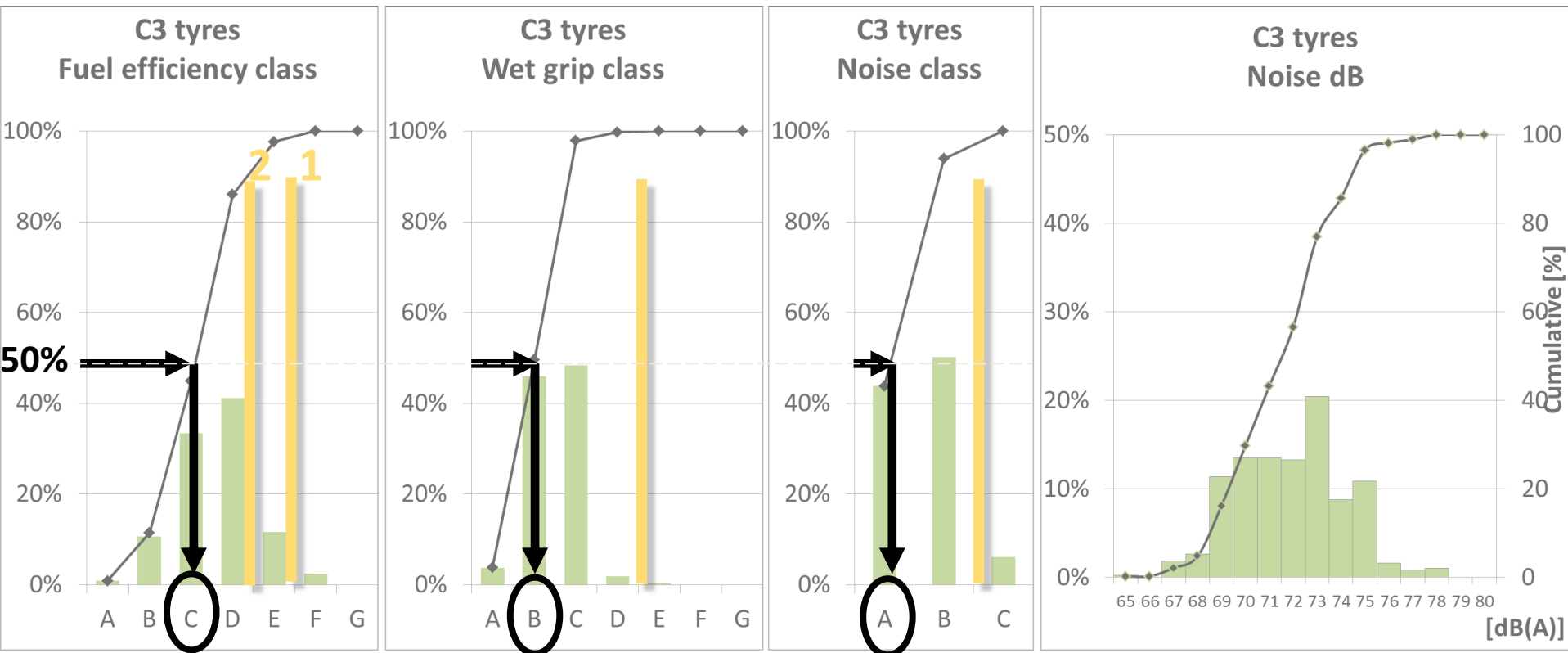
2016 Statistics C3 tyres

Significant number of tyres perform (much) better than the limits



A small percentage of tyres does not meet the 2012 limits

2016 Statistics C3 tyres



50 percentile complies with "CBA" label

Summary of observations

- (consistent) trend for better performance in all aspects/classes
- Only a small percentage of the tyres (1-5%) does not yet meet the 2012 limits (Note: these can be legally sold for some time)
- Significant number of tyres perform (much) better than the limits
- The 50 percentile of these tyres complies roughly with
 - Label C for Rolling Resistance
 - Label B for Wet Grip
 - Label A for Noise

Strengthening Tyre Limits

Regulation 661/2009 and 1222/2009

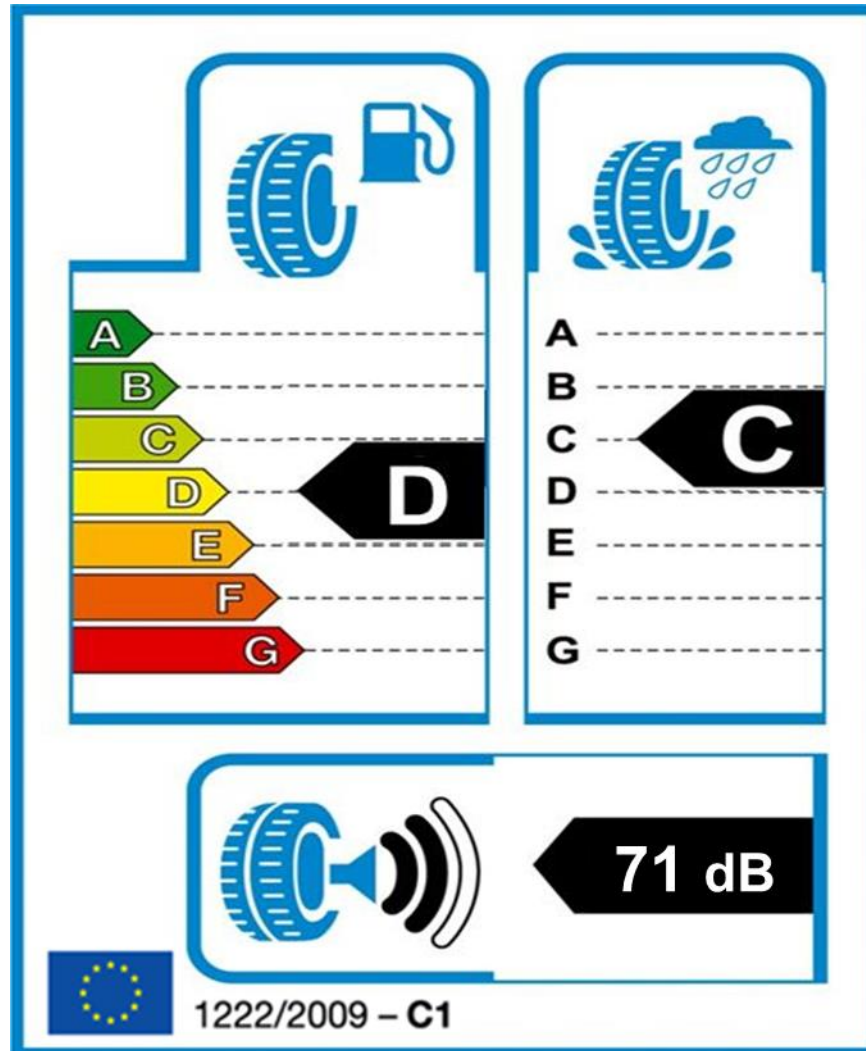
Johan Sliggers

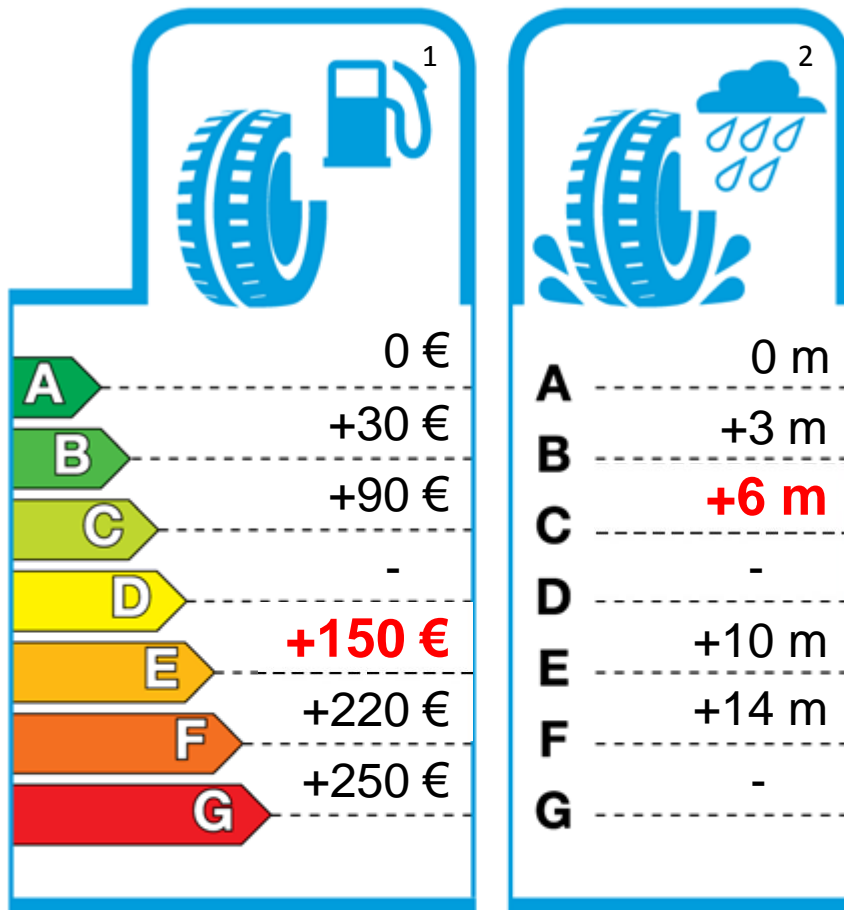
Ministry of Infrastructure and the Environment

The Netherlands

132nd MVWG, July 2016

The average tyre label in the NLs





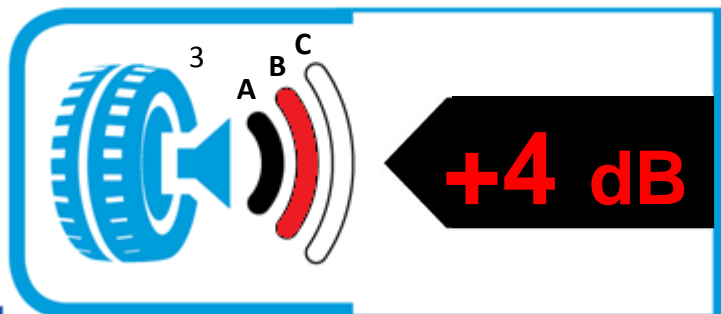
¹ Extra fuel costs per year (17000 km/yr)

² Extra braking distance wet road at 80 km/h (Braking distance A=27 m)

³ Noise*

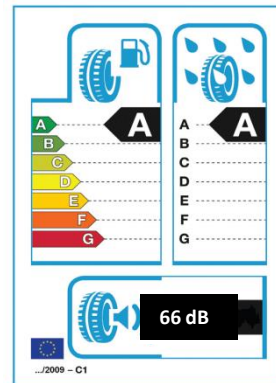
- A: 2 times as quiet
- B: average
- C: 2 times as loud

* Doubling noise is 3 dB



***Triple-A* tyres – benefits for environment, noise, safety and economy**

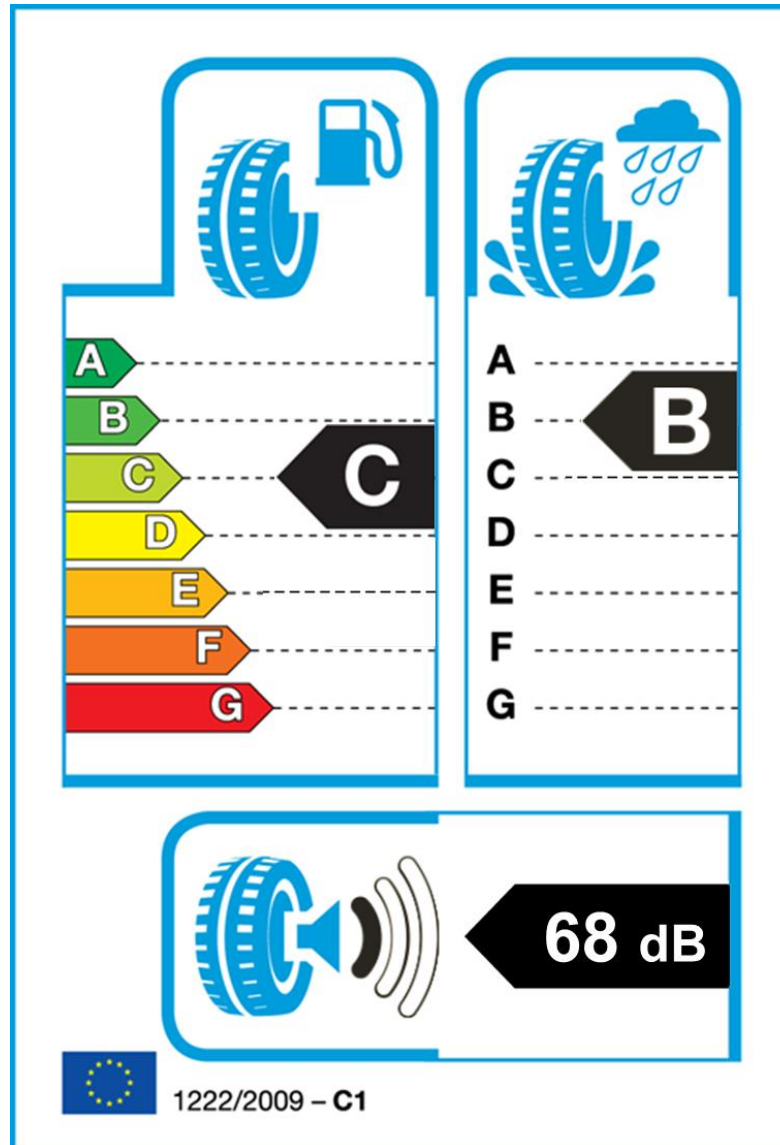
Results of 'Potential benefits of Triple-A tyres in the Netherlands' and the EU, a study performed by order of the Dutch Ministry of Infrastructure & Environment



Potential Benefits Best Tyres in EU

Potential benefits	Energy	Safety	Noise	TOTAL
Annual fuel savings [billion l]	17	-	-	
Annual CO ₂ reduction [MtCO ₂]	42	-	-	
Reduced number of fatalities	-	2567	-	
Reduced number of slight/serious injuries	-	19631/ 12353	-	
Reduced number of annoyed people [millions]	-	-	13	
Reduced number of sleep disturbed people [millions]	-	-	6	
Annual cost savings [billion €]	13	10	11	34

Tyre label (Reg. 1222/2009)



Rolling resistance (Reg. 661/2009)

Tyre type	Current value (kg/ton)	Suggestion NLs
C1	≤ 10.5	-1.5
C2	≤ 9.0	-1.0
C3	≤ 6.5	-0.5

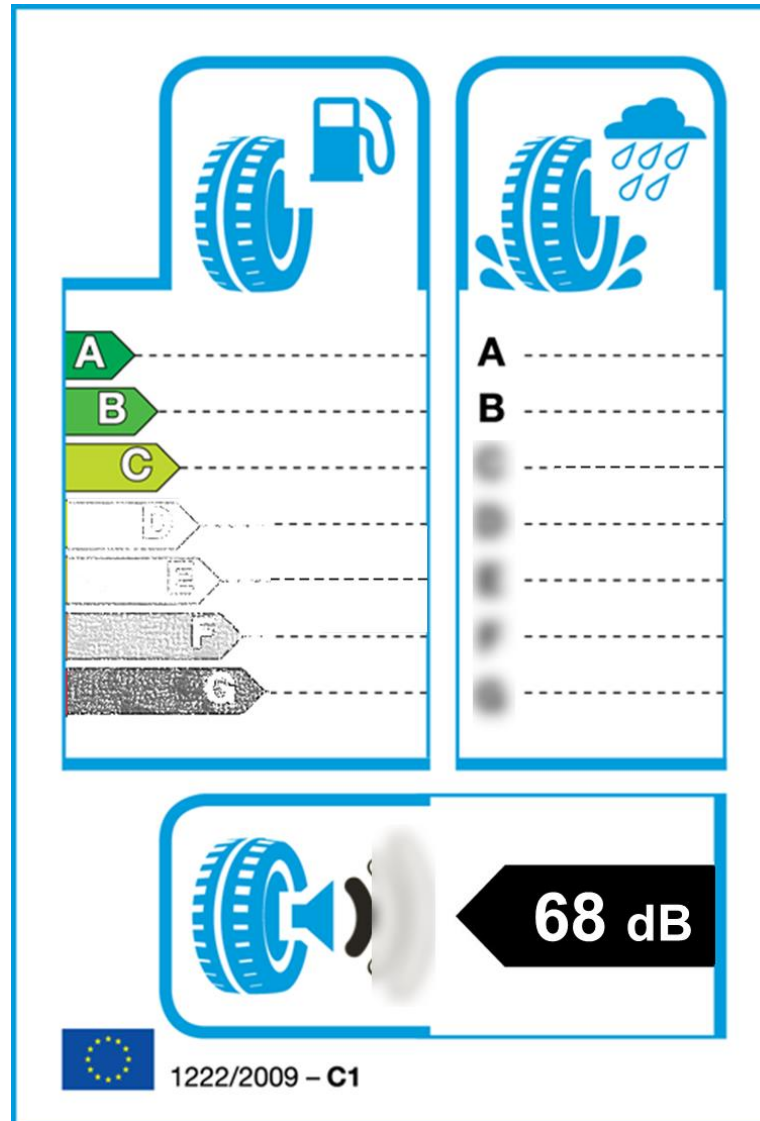
Wet grip indexes (Reg. 661/2009)

Tyre type	Current value (G)	Suggestion NLs
C1	≥ 1.1 (1.0; 0.9)	+0.3
C2	≥ 0.95 (0.85)	+0.3
C3	≥ 0.80 (0.65)	+0.3

External Noise (Reg. 661/2009)

Tyre type	Current limit value (dB(A))	Suggestion NLs
C1A-E	70-74	-3dB
C2	72-73	-2dB
C3	73-75	-4dB

Tyre label (Reg. 1222/2009)



Potential Benefits EU of NLs suggestion

Potential benefits	Energy	Safety	Noise	TOTAL
Annual fuel savings [billion l]	13.5	-	-	
Annual CO ₂ reduction [MtCO ₂]	35	-	-	
Reduced number of fatalities	-	2000	-	
Reduced number of slight/serious injuries	-	15000/ 10000	-	
Reduced number of annoyed people [millions]	-	-	13	
Reduced number of sleep disturbed people [millions]	-	-	6	
Annual cost savings [billion €]	10	8	11	29

Question to the European Commission

-Please start with the evaluation and subsequent strengthening of the limit values for tyres on wet grip, rolling resistance and noise (Regulation 661/2009).

-Adjust Regulation on Tyre Labelling accordingly (Regulation 1222/2009)

Adjustment to inf doc GRB-62- 11-Rev.1

Proposal for amendments to the 02 series
of amendments to Regulation 117