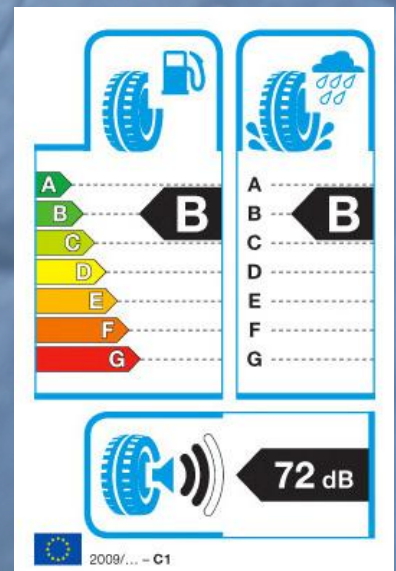
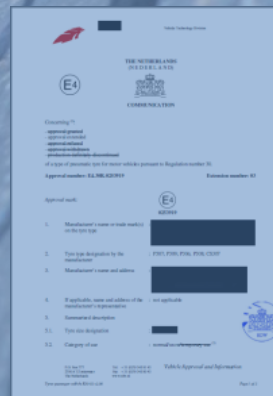




National
Measurement
Office

The EU Tyre Label – Tyre Technical Information



Matthew Eglinton - December 2014

Project prepared for **The Department for Transport**



National
Measurement
Office

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Executive Summary

This Technical Information project has focused on two separate points; assessment of a selection of tyre technical data from manufacturers in the UK, using guidelines produced by the European Commission state recommend a number of criteria that technical assessment data must possess, and contact with UK importers and authorised representatives regarding Article 4, raising awareness of supplier responsibilities.

From engagement with these selected businesses, **80%** of tyre manufacturers that were contacted provided some kind of technical information. Information demonstrated that the majority were using TUV/RDW for accredited technical assessment, with the larger manufacturers carrying out in-house assessment. Both the test facilities and internal testing appear to follow EC guidelines on tyre testing, however clarification will be needed on signing technical documentation to prove authenticity. However, only **29%** of tyre wholesalers and authorised representatives responded to NMO regarding supplier responsibilities; however some of them did clarify their stance on not importing from outside the European Union.

This project has collated varied and detailed tyre technical information, demonstrating that the testing appears to be in line with the UNECE 117 regulations and its corresponding EC guidance. However, the implementation of the statutory instrument for tyre labelling will allow NMO to conduct more in-depth projects into tyre technical assessment and its integrity, by conducting independent testing of risk-assessed tyres.

Tyre Technical Information Assessment

This report is based on on-going work carried out by the Enforcement team at the National Measurement Office (NMO), Teddington. The Regulations focused on for this report are Regulation (EC) No 1222/2009 'establishing a framework for the labelling of tyres with respect to fuel efficiency and other essential parameters', along with the amending Regulations (EU) No 228/2011 and No 1235/2011.

1. Introduction

The EU tyre label is a harmonised document that is designed to provide easy-to-access information to the end-user. It provides an opportunity to compare different products in order to make a more informed decision about their purchase.

However, without enforcement testing procedures in place, it is difficult to accurately assess the validity of the tyre label, potentially compromising the integrity of the information. As there is no statutory instrument for the energy labelling of tyres within the UK, the NMO currently do not have any powers for carrying out tyre testing investigations.



ETRMA Tyre Labelling Compliance Campaign

ETRMA¹ have already carried out testing on a number of different tyres, highlighting the differences (if any) between manufacturer claims (based on their labels and technical information) and their results. 49 tyres were tested during the campaign; 24 from ETRMA members, 25 from non-ETRMA members. Tyres selected were based on strict and objective criteria, which focused on:

- Summer passenger (C1) tyres
- Rolling Resistance (RR) and Wet Grip (WG)
- Grade C or above for both RR & WG

The tyre list was based on the advice of a specialized consultant analyzing label information from 270 web sites. The results demonstrated that whilst there are tyres performing to their tyre label claim and technical documentation, there also appears to be tyres with the potential to mislead consumers on the UK market if not strictly enforced.

¹ <http://www.etrma.org/>

Tyre Technical Information Assessment

The National Measurement Office tyre enforcement programme is split into three sections:

- **Stage 1: Information and Awareness** - Understanding the market, establishing contacts with the UK tyre industry and engaging with businesses
- **Stage 2: Implementation of information** - Gathering technical information, establishing network of tyre distribution within the UK
-----Anticipated Implementation of UK Statutory Instrument-----
- **Stage 3: Product Testing** – carrying out of independent testing to ensure the validity of rating claims for tyres sold within the UK

As the tyre labelling contract progresses through its second stage, it is important to ensure technical documentation from tyre suppliers is of a sufficient standard. Establishing what businesses need to be providing to satisfy the regulations helps to ensure the validity of the label and achieve overall compliance.

Tyre labelling information can be requested from either:

- The manufacturer
- The importer
- The authorised representative

- as part of their responsibilities outlined in Article 4 of Regulation (EC) No 1222/2009. Technical information may come in a variety of different formats depending on who produces it, be it the manufacturer themselves or an accredited laboratory such as:

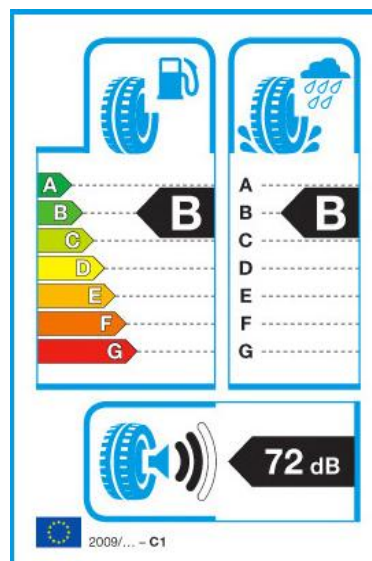
- Smithers Rapra - <http://www.smithersrapra.com/>
- TUV Nordland - <http://www.tuv.com/en/uk/home.jsp>
- Rubber Consultants - <http://www.rubberconsultants.com/>
- TASS International - <https://www.tassinternational.com/>
- Millbrook - <http://www.millbrook.co.uk/>
- UTAC - <http://www.utac.com/>

Tyre Testing Methodology

PROCESS: Worst Case Criteria UNECE Regulation 117 Tyres/Road Noise

Testing carried out on tyres needs to include all types of tolerances, and is usually grouped by “families” according to the specific tyre tread pattern.

The Vehicle Certification Agency has determined the “worst case” policy for choosing tyres for testing. This means that in a family, each rating is governed by one tyre, so the label may be reflective of the ratings for 3 different tyres in a family (i.e. the label may not reflect the actual values for that tyre, and that tyre may never have



Tyre Technical Information Assessment

been tested, an idiosyncrasy compared to most testing regimes).

If the worst case ratings are considered too bad, choices must be made, either:

- to drop the worst case tyres from a range (and add them to another, or drop them altogether- this is often a marketing choice)
- or to split the family and test in a different place, then use that rating for those tyres above/below as applicable

When Manufacturers are carrying out the testing of their tyres in order to produce Labelling Information, the *Worst Case Criteria* should be used under **UNECE Regulation 117 Tyres/Road Noise**.

- **Rolling Resistance Worst Case Scenario:** For tyres with the same tread pattern and aspect ratio, the tyre with the smallest Load Index (LI) should be tested. For tyres with the same tread pattern but different aspect ratios the one with the lowest Load Index and largest aspect ratio will be considered as the worse case and should be used as the representative tyre(s).
- **Wet Grip Worst Case Scenario:** For tyres of the same tread pattern, the tyre with the smallest section width, largest aspect ratio and smallest rim diameter will, in general, represent the tyre with the lower Wet Grip Index and therefore considered to be the worst case representative tyre(s).
- **External Noise Worst Case Scenario:** For tyres of the same tread pattern, the tyres with the greatest section width, smallest overall diameter and lowest aspect ratio are considered worst case and should be used as the representative tyre(s).

Approximate testing costs for the label are as follows when carried out externally by an accredited laboratory; the testing procedures can be found within UNECE Regulation 117 and its subsequent amendments.*

Criteria	Testing Cost (per tyre)
Rolling Resistance	£400
Wet Grip	£1,700
External Noise	£2,000

**Source: Millbrook / Transport Research Laboratory estimated costs - 2012*

2. Aim

The principle aim of this project is to contact a selection of manufacturers who have a base or sales office within the UK, obtaining technical information from them as well as engaging them in raising awareness of the importance of fulfilling legislative responsibilities for their products. The technical information should be compared to EC guidance for reasons of conformity. As NMO are currently not carrying out testing projects on tyres, and currently there is no Statutory Instrument to enforce any non-conformity, this project is of an informative and collaborative nature only.

In addition, since tyres are also placed on the market by wholesale suppliers, it is critical to ensure UK tyre wholesalers are aware of their responsibilities and the potential issues of non-compliance.

3. Market Engagement and Testing Criteria

NMO approached a variety of manufacturers over the course of the year (when carrying out compliance/enforcement visits); requesting access to technical documentation for purposes of comparison. Ten manufacturers were contacted over the course of 2014, requesting a meeting and the obtaining of tyre technical information of their choice. They were chosen based on an assessment of tyre market share by global sales value:



The manufacturers selected for the project accounted for varying levels of global tyre sales, with some forming larger proportions, and the others forming substantially smaller proportions.

Tyre Technical Documentation Specification

Once technical information was obtained from the manufacturer, the documentation was compared against a set of criteria for tyre labelling information. These criteria have come from a guidance document generated by the European Commission (see Appendix). It contains specifics recommended in order to satisfy the requirements for technical documentation. *Article 3 (5)* of (EC) Regulation N° 1222/2009 defines “technical documentation” as information relating to tyres, including the manufacturer and brand of the tyre; description of the tyre type or the grouping of tyres determined for the declaration of the fuel efficiency class, wet grip class and external rolling noise class and measured value; test reports and testing accuracy..

4. Assessment Results

Out of the 10 manufacturers contacted for this project, **80%** met with the NMO and subsequently provided technical information within the suggested timescale. The technical information was compared with the criteria found within the European Commission Guidance Document; results are shown below:

Tyre Technical Information Assessment

Brand	Name	Brand Description	Tyre Class	Size	Category of Use	Grouped Sizes	ID code	Test Report	label	Person and signature	ID
Manufacturer 1	✓	✓	✓	✓	✓	X	✓	✓	X	No sig	
Manufacturer 2	✓	✓	X	✓	X	X	✓	partial	X	No sig	
Manufacturer 3	n/a										
Manufacturer 4	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	
Manufacturer 5	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	
Manufacturer 6	✓	✓	✓	✓	✓	X	✓	✓	X	X	
Manufacturer 7	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	
Manufacturer 8	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	
Manufacturer 9	n/a										
Manufacturer 10	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	

It is important to note that failure to provide information for this report within the prescribed timescale is not an indicator of not possessing technical information, since the request to provide was a voluntary one.

Additional Points

The accredited test facility reports also include diagrammatic representations of the tyre and tread for ease of identification. Tyre manufacturers can request further information depending on what they need for their tyre (in addition to UNECE 117 regulation requirements.)

As more technical information is collated regarding tyre characteristics, assessing the relative strengths of:

- how detailed it is (tyre specifications, test conditions etc), and
- how many tyres within a 'tyre family' does the document represent

will become easier as NMO progresses the tyre aforementioned tyre programme. If NMO were enforcing the legislation right now then a manufacturers carrying out their own testing may need to review what testing documentation needs to demonstrate; for example, some were missing a signature, and did not show the grouping of tyres covered by the test document. This certainly indicates a recommendation for repeating this project once the Statutory Instrument is out - which would also provide scope to engage with more companies selling tyres on the UK market.

5. Tyre Wholesaler Awareness Engagement

Wholesale Importers

Risk assessing the market for tyre wholesalers posed fewer challenges, due to previous intelligence indicating that this area of the sector potentially could be high risk throughout. This was attributed to wholesalers assuming that because they were neither distributors to end users (consumers) or manufacturers of their product, they did not have to fulfil any obligations with regards to the tyre labelling regulation.

Twenty five tyre wholesalers and three national retailers (due to their size and increased ability to import tyres as authorised representatives) were chosen from around the UK, accounting for a significant proportion of the tyre import market. They were contacted informing them of NMO's role as the market surveillance authority for the EU Tyre Label, the regulatory requirements, and a request to respond confirming this within an appropriate timeframe.

Out of the twenty five tyre wholesale distributors that were contacted, five responded to the NMO concerning their responsibilities. All three retailers contacted NMO, with one retailer providing additional information plus a detailed commercial viewpoint on imported tyres.

NMO had a total response rate of **29%** for this engagement.

6. Conclusion and Recommendations

This project has highlighted a number of issues with regards to contacting suppliers of tyres.

Manufacturers

Whilst the manufacturers chosen were willing to engage with NMO, and were largely able to provide technical information, manufacturers who test internally appear to not fulfil all the requirements as stated within the European Commission Guidelines (V4507/0009/0003). It is unknown whether this may affect the validity of the testing documentation; this will be more clearly understood once the statutory instrument is implemented.

Wholesalers and Authorised Representatives

Response from wholesalers was less encouraging. **Tyre importers have the same responsibilities as manufacturers** (Article 4 of Regulation (EC) No 1222/2009). Whilst it is disproportionate to test every single tyre, technical information for the tyres importers bring into the EU must be present and available, with due consideration taken for their products to ensure compliance.

It is important that the finalised statutory instrument for EU tyre labelling has a requirement for obtaining appropriate technical information. Other pieces of legislation that NMO enforces, such as the Energy Information Regulations 2011, explicitly state that suppliers *'make available an electronic version of the documentation on request to the market surveillance authority and to the European Commission within 10 working days of receipt'* (**Regulation 7 (3b) of S.I. 2011 No. 1524 - [The Energy Information Regulations 2011](#)**).

This project has also started to compile a reference bank of tyre data, albeit with individual tyres of 10 different brands, demonstrating the comparison of levels of technical documentation, quality of reports and the methodology. As the NMO still does not have a statutory instrument for EU tyre labelling, it restricts NMO's ability as a Market Surveillance Authority to request technical documentation from relevant businesses.

Recommendations

As the transposition of this EU regulation into UK law has not yet been finalised, it has been challenging for the NMO to carry out projects with the same scope and depth as other pieces of legislation currently enforced.

It is recommended that NMO seek to carry out further projects on tyre labelling technical documentation once the statutory instrument has been implemented. It is imperative that purchasing projects are carried out in this area of legislation, however it is appreciated that testing costs are significantly higher than any other piece of legislation that NMO currently enforces.

It will be important to continue informing suppliers of their obligations to the regulations to ensure maximum compliance. Establishing a presence within the industry has proved vital for maintaining levels of compliance and any subsequent work with manufacturers should involve a more in depth approach. Label information provided by suppliers needs to be accurate; the obtaining of test reports with the aim of carrying out independent testing is a natural progression to this project. This will help preserve the validity of the tyre label and its role in aiding consumers in choosing more fuel efficient, safer, quieter tyres.

7. Appendix

ANNEX

ii) European Commission Guidance for Tyre Technical Information

The technical documentation referred to in Article 3(5) shall include at minimum:

- a) Name and address of the supplier (manufacturer or importer)
- b) Brand name and trade description
- c) Tyre class (C1, C2 or C3)
- d) Tyre size and service description
- e) Category of use and traction classification, if applicable, as defined in UNECE Regulation 117.02
- f) In case of labelling declaration done for a range of tyres based on Article 3(5) of Regulation (EC) No 1222/2009, provide the list of grouped tyre sizes and tested reference sizes. In this case, provide the documentation showing the criteria on which the grouping has been based.
- g) Company product identification code (sales code, part number, etc.)
- h) Test reports for the three tyre characteristics:

a. Fuel efficiency class:

- i. Report of test performed according to annex 6 of UNECE 117.02 and its subsequent amendments;
- ii. Are you a reference laboratory listed in the Commission Communication 2012/C 86/03)?

1. Yes: provide the alignment equation based on the regression coefficients reported from the Expert Group on laboratory alignment for the measurement of tyre rolling resistance

2. No: provide the alignment report, in the form of Annex E (Template for candidate/reference Laboratory Alignment) showing the alignment equation obtained according to the procedure laid down in Annex IVa of Implementing Commission Regulation (EU) N°1235/2011 (Laboratory alignment procedure for the measurement of rolling resistance)

- iii. Testing accuracy: The Laboratory shall give evidence of the level of measurement reproducibility (σ) of the machine used for the test.

b. Wet grip class:

- i. Report of the test performed according to:

- 1. Annex V of Commission Regulation (EU) No 228/2011 for C1 tyres*
- 2. Article 1.2.2 of Commission Regulation (EU) No 1235/2011 for C2 and C3 tyres*

- ii. Calculation of wet grip index (G) made from report under (i) in accordance with article 1.2.3 of Commission Regulation (EU) No 1235/2011

c. External Rolling Noise class and measured value:

- i. Report of the test performed according to 117 and its subsequent amendments showing the measured and calculated values
- ii. Provide a document showing how the external rolling noise class has been defined on the basis of the limit values (LV) of stage 2 set out in paragraph 6.1 of UNECE Regulation 117.02

- 1. Provide the UNECE Regulation 117 certificate showing the category of use and classification of the tyre*
- 2. In case of tyre not yet type-approved according to UNECE regulation 117.02, following the implementation timeline of EC Regulation 661/2009, provide technical documentation showing how the category of use has been determined*

- i) The label as defined by the supplier (manufacturer or importer) as prescribed in Annex II of Regulation (EC) No 1222/2009, must be attached to the Technical Documentation
- j) Identification and signature of the person empowered to bind the supplier (manufacturer or importer)

END OF REPORT