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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### Working Party on Lighting and Light-Signalling

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Item 4 (i) (iv) of the provisional agenda

**Other business – Any other business**

## **Proposal for Supplement 9 to the 01 series of amendments to Regulation No. 45 (Headlamp cleaners)**

### **Submitted by the expert from the International Automotive Lighting and Light Signalling Expert Group (GTB)\***

The text reproduced below was prepared by the expert from GTB to amend the requirements for the mixture in the dirt test. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## I. Proposal

Annex 4, paragraph 2.1., amend to read;

"2.1. Test mixture

2.1.1. For headlamp with the outside lens in glass:

A mixture of water and polluting agent to be applied to the headlamp shall be composed of:

- (a) 9 parts by weight of silica sand with a particle size of 0-100  $\mu\text{m}$  ~~corresponding to distribution prescribed in paragraph 2.1.3,~~
- (b) 1 part by weight of vegetable carbon dust **produced from** (beech wood) with a particle size of 0-100  $\mu\text{m}$ ,
- (c) 0.2 part by weight of NaCMC<sup>1</sup>, and
- (d) 5 parts by weight of sodium chloride (pure at 99 per cent).**

An appropriate quantity of distilled water with a conductivity of  $\leq 1$  mS/m.

2.1.2. For headlamp with the outside lens in plastic material:

The mixture of water and polluting agent to be applied to the headlamp shall be composed of:

- (a) 9 parts by weight of silica sand with a particle size of 0-100  $\mu\text{m}$  ~~corresponding to distribution prescribed in paragraph 2.1.3,~~
- (b) 1 part by weight of vegetable carbon dust **produced from** (beech wood) with a particle size of 0-100  $\mu\text{m}$ ,
- (c) 0.2 part by weight of NaCMC<sup>1</sup>,
- (d) 5 parts by weight of sodium chloride (pure at 99 per cent),**
- (e) 13 parts by weight of distilled water with a conductivity of  $\leq 1$  mS/m, and  $2 \pm 1$  drops of surfactant<sup>2</sup>.

~~2.1.3. Particle size distribution~~

<i>Particle size (in <math>\mu\text{m}</math>)</i>	<i>Particle size distribution in (%)</i>
0 to 5	12 $\pm$ 2
5 to 10	12 $\pm$ 3
10 to 20	14 $\pm$ 3
20 to 40	23 $\pm$ 3
40 to 80	30 $\pm$ 3
80 to 100	9 $\pm$ 3

2.1.43. The mixture shall be fit for applying to the headlamp by the spray gun specified under 2.3. below. The mixture shall be used not earlier than two hours and not later than 24 hours after preparation. It shall be given into the gun immediately before use."

Add a new footnote 2, to read:

“<sup>2</sup> The tolerance on quantity is due to the necessity of obtaining dirt that correctly spreads out on all types of plastic lens.”

## II. Justification

The Regulations currently specify several test mixtures to simulate dirt during testing of lamps. As there is no reason to use different kinds of test mixtures it is proposed to amend the Regulations by introducing a uniform test mixture to be used for all the corresponding tests. In addition, to avoid misinterpretation the wording “beech wood” is replaced by “produced from beech wood”.

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