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Working Party on Lighting and Light-Signalling (GRE)

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Item 5.4. of the provisional agenda

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 69

(Rear-marking plates for slow moving vehicles)

Submitted by the expert from India

Note: The text reproduced below was prepared by the expert from India in order to introduce requirements for bonding strength of adhesive materials and for resistance to power washing and adhesion strength of retro-reflective marking plates. The text is based on informal document No. GRE-56-25, distributed without an official symbol during the fifty-sixth GRE session (see report ECE/TRANS/WP.29/GRE/56, para. 66). The modifications to the current text of the Regulation are marked in **bold** characters.

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Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

A. PROPOSAL

Annex 8,

Insert a new paragraph 4.1., to read:

**"4.1. The adhesion of retro-reflective materials shall be determined after 24 hours curing time by utilizing a 90-degree peel on a tensile strength testing machine."**

Paragraphs 4.1. to 4.3. (former), renumber as paragraphs 4.2. to 4.4.

Paragraph 7., amend to read:

**"7. Resistance to cleaning**

**7.1. Manual cleaning**

**7.1.2.** A test sample smeared with a mixture of detergent lubricating oil and graphite shall be easily cleaned without damage to the retro-reflective **surface** or fluorescent surface when wiped with a mild aliphatic solvent such as n-heptane, followed by washing with a neutral detergent.

**7.2. Power washing**

**7.2.1. When subjected to a continuous spraying action for 60 seconds on the test component in its normal mounting conditions, a test sample shall show no damage to the retro-reflective surface or delaminate from the substrate or separation from the sample mounting surface under the following set-up parameters:**

- (a) Water/wash solution pressure  $8 \pm 0.2$  MPa;**
- (b) Water/wash solution temperature  $60^\circ - 5^\circ$  C;**
- (c) Water/wash solution flow rate 6 to 7 l/min;**
- (d) The tip of the cleaning wand to be positioned at distance of  $600 \pm 20$  mm away from the retro-reflective surface;**
- (e) Cleaning wand to be held at no greater angle than 45 degrees from perpendicular to the retro-reflective surface;**
- (f) 40 degree nozzle creating wide fan pattern."**

B. JUSTIFICATION

This proposal is in a line with the proposal by CLEPA for amendments to Regulation No. 104 (ECE/TRANS/WP.29/2006/66), adopted by WP.29 and AC.1 at their June 2006 sessions (see report ECE/TRANS/WP.29/1052, paras. 53 and 80).

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