

Transmitted by the expert from India

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 104
(Resistance to power washing)

Note: The proposal from CLEPA in order to introduce requirements for resistance to power washing of retro-reflective markings is acceptable in principle for India. However, India would like to suggest some amendments to this proposal. The proposed modifications to the text of ECE/TRANS/WP.29/GRE/2006/2 are marked in **bold** characters.

A. PROPOSAL

Paragraphs 5.2. and 5.2.1., amend to read:

"5.2. Power washing

5.2.1. 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) ~~Maximum~~ Water/wash solution pressure 80 ± 2 bar;
- (b) ~~Maximum~~ Water/wash solution temperature $60^\circ - 5^\circ\text{C}$;
- (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 ± 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

India is of the opinion that requirements of "separation" and "delaminate" is required for evaluation of retro reflective sheet and generally used in all international standards.

Test procedure and requirements should be more specific and clear and it is appropriate to indicate tolerances too. The proposed tolerances are based on the general tolerances requires in the test rigs.

Flow rate specification derived based on the car wash equipment manufacturer data available in the market.
