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**Working Party on the Transport
of Dangerous Goods**
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PROPOSALS FOR AMENDMENTS TO ANNEXES A AND B OF ADR

Marking – ADR Marginal 10 500

Transmitted by the Governments of Spain and Germany

Executive summary: This document outlines a proposal to establish uniform conditions of approval of the orange-coloured plates and identification numbers.

Action to be taken: Amendment to ADR marginal 10 500.

Related documents: TRANS/WP.15/1999/45

INTRODUCTION

Marginal 10 500 of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) establishes the particulars, materials and dimensions of the rectangular reflectorized orange-coloured plates.

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Paragraph 1 specifies the dimension, the chromaticity co-ordinates and the luminance factor of the orange plates. Paragraph 6, for the identification numbers, indicates the dimensions, colour and legibility and indelibility persistence after 15 minutes' engulfment in fire.

However, there is no official approval for orange plates and identification numbers, and for that, the competent authority, and especially the agents in charge of checking the conditions of transport of dangerous goods, cannot distinguish if the orange plates are correct or not.

For this reason, it would be convenient to amend marginal 10 500.

At their last session in November 1999, the members of WP.15 discussed the Spanish proposal (TRANS/WP.15/159, paragraphs 59 to 61) which was supported by a number of States, in particular Germany (see also INF 36).

After the discussion, Germany and Spain stated that they would be prepared to submit a new proposal taking into account the results of the discussions.

Proposal

The third sentence of marginal 10 500 (6) of ADR should be replaced by the following wording:

“The identification numbers, by remaining clearly legible after they have been exposed to external effects such as fire, chemical and mechanical stress (falling rocks, cleaning, exchange of figures, abrasion caused by the weather), shall be indelible and permanently identifiable.”

These requirements will be met in particular if:

- (a) the identification numbers are clearly legible from a distance of 30 m in the daylight and the orange-coloured plates are retroreflecting in the darkness;
- (b) the identification numbers on the orange-coloured plate remain identifiable during the action of flames at 800 °C and also after 30 minutes' engulfment in fire;
- (c) durable material has been used for the orange-coloured plate;

The orange-coloured plates shall be approved by the competent authority and shall bear an approval mark.

Justification

The existing regulations of marginal 10 500(6) of Annex B to ADR have been disputed by both the supervisory authorities and the fire services since they were introduced. The fact that it

was not always possible to clearly identify the plates displaying the identification numbers repeatedly caused problems when checks were conducted or emergency services were called. Because of the materials which at present are generally used for the manufacture of the plates and identification numbers, these quickly become illegible while being used daily (wear/handling) and no longer serve their purpose.

It can quite definitely be said, therefore, that in many cases the identification numbers on orange-coloured plates are not clearly visible. The existing marginal 10 500(6) of ADR requires that the identification numbers and letters must remain legible after 15 minutes' engulfment in fire. According to information from the fire services, this requirement does not correspond with reality, because not only the duration of the fire itself is a decisive factor but also the effects of the heat or the formation of soot so that it cannot be ensured that the identification numbers and letters are identifiable.

Appropriate tests have shown that, owing to technical progress that has been made, the requirements under (a) and (b) above correspond with practice. It is possible therefore to achieve the objectives referred to by applying the technical procedures which are at present available.

Technical standards will have to be developed establishing in detail the technical properties of the material which has to meet the requirements of (a) and (b).
