

## Leaflet No. 2010-1

### Application of Conspicuity Markings on Heavy Goods Vehicles

Note: *Heavy Goods vehicles and their trailers must carry conspicuity markings. Two systems are acceptable in Ireland, the traditional Irish markings to S.I. No. 128 of 1970, Road Traffic (Lighting of Vehicles) (Amendment) Regulations, 1970 or markings conforming to UNECE Regulations 48 and 104. Markings to Regulation 48 (application) must use material conforming to UNECE 104. The same system must be used on the sides and rear of the vehicle. Application of S.I. No. 128 of 1970 markings is well known; the following covers application requirements for UNECE 104 markings and should be used in concert with RSA Circular VI 05/08 Reflective Vehicle Markings.*

#### **Excerpt from UNECE Regulation 48**

6.21. CONSPICUITY MARKINGS (Regulation No. 104)

6.21.1. Presence

6.21.1.1. Prohibited: on vehicles of categories M<sub>1</sub> and O<sub>1</sub>.

6.21.1.2. Mandatory:

6.21.1.2.1. to the rear:

full contour marking on vehicles exceeding 2,100 mm in width of the following categories:

- (a) N<sub>2</sub> with a maximum mass exceeding 7.5 tonnes and N<sub>3</sub> (with the exception of chassis-cabs, incomplete vehicles and tractors for semi-trailers)
- (b) O<sub>3</sub> and O<sub>4</sub>

6.21.1.2.2. to the side:

6.21.1.2.2.1. partial contour marking on vehicles exceeding 6,000 mm in length (including the drawbar for trailers) of the following categories:

- (a) N<sub>2</sub> with a maximum mass exceeding 7.5 tonnes and N<sub>3</sub> (with the exception of chassis-cabs, incomplete vehicles and tractors for semi-trailers)
- (b) O<sub>3</sub> and O<sub>4</sub>

6.21.1.2.3. However, where the shape, structure, design or operational requirements make it impossible to install the mandatory contour marking, a line marking may be installed.

6.21.1.3. Optional:

6.21.1.3.1. on all other categories of vehicles, not otherwise specified in paragraphs 6.21.1.1. and 6.21.1.2. above, including the cab of tractor units for semi-trailers and the cab of chassis-cabs.

6.21.1.3.2. partial or full contour marking may be applied instead of mandatory line markings, and full contour marking may be applied instead of mandatory partial contour marking.

6.21.2. Number

According to the presence.

6.21.3. Arrangement

The conspicuity markings shall be as close as practicable to horizontal and vertical, compatible with the shape, structure, design and operational requirements of the vehicle.

6.21.4. Position

6.21.4.1. Width

6.21.4.1.1. The conspicuity marking shall be as close as practicable to the edge of the vehicle.

6.21.4.1.2. The cumulative horizontal length of the conspicuity marking elements, as mounted on the vehicle, shall equate to at least 80 per cent of the overall width of the vehicle, excluding any horizontal overlap of individual elements.

6.21.4.1.3. However, if the manufacture can prove to the satisfaction of the authority responsible for type approval that it is impossible to achieve the value referred to in paragraph 6.21.4.1.2. above, the cumulative length may be reduced to 60 per cent and shall be indicated in the communication document and test report <sup>1/</sup>.

6.21.4.2. Length

6.21.4.2.1. The conspicuity marking shall be as close as practicable to the ends of the vehicle and reach to within 600 mm of each end of the vehicle (or cab in the case of

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<sup>1/</sup> This provision does apply until 5 years after the official date of entry into force of the 03 series of amendments to this Regulation.

tractor units for semi-trailers).

6.21.4.2.1.1. for motor vehicles, each end of the vehicle, or in the case of tractors for semi-trailers the each end of the cab;

6.21.4.2.1.2. for trailers, each end of the vehicle (excluding the drawbar).

6.21.4.2.2. The cumulative horizontal length of the conspicuity marking elements, as mounted on the vehicle, excluding any horizontal overlap of individual elements, shall equate to at least 80 per cent of:

6.21.4.2.2.1. for motor vehicles, the length of the vehicle excluding the cab, or in the case of tractors for semi-trailers, if fitted, the length of the cab;

6.21.4.2.2.2. for trailers, the length of the vehicle (excluding the drawbar).

6.21.4.2.3. However, if the manufacture can prove to the satisfaction of the authority responsible for type approval that it is impossible to achieve the value referred to in paragraph 6.21.4.2.2. above, the cumulative length may be reduced to 60 per cent and shall be indicated in the communication document and test report 10/.

6.21.4.3. Height

6.21.4.3.1. Line markings and contour markings lower element(s):

As low as practicable within the range:

Minimum: not less than 250 mm above the ground.

Maximum: not more than 1,500 mm above the ground.

However, a maximum mounting height of 2,100 mm may be accepted where technical conditions prevent compliance with the maximum value of 1,500 mm or, if necessary, to fulfil the requirements of paragraphs 6.21.4.1.2., 6.21.4.1.3., 6.21.4.2.2. and 6.21.4.2.3., or the horizontal positioning of the line marking or the lower element(s) of the contour marking.

6.21.4.3.2. Contour markings upper element(s):

As high as practicable, but within 400 mm of the upper extremity of the vehicle.

6.21.5. Visibility

The conspicuity marking shall be considered visible, if at least 80 per cent of the illuminating surface of the marking is visible when viewed by an observer positioned at any point within the observation planes defined below:

6.21.5.1. for rear conspicuity markings (see Annex 11, Figure 1) the observation plane is perpendicular to the longitudinal axis of the vehicle situated 25 m from the extreme end of the vehicle and bounded by:

6.21.5.1.1. in height, by two horizontal planes 1 m and 3.0 m respectively above the ground,

6.21.5.1.2. in width, by two vertical planes which form an angle of 15° outwards from the vehicle's median longitudinal plane and which pass through the intersection of the vertical planes parallel to the vehicle's median longitudinal plane delimiting the vehicle's overall width, and the plane perpendicular to the longitudinal axis of the vehicle that delimits the end of the vehicle.

6.21.5.2. for side conspicuity markings (see Annex 11, figure 2) the observation plane is parallel to the longitudinal median plane of the vehicles situated 25 m from the extreme outer edge of the vehicle and bounded by:

6.21.5.2.1. in height, by two horizontal planes 1 m and 3.0 m respectively above the ground,

6.21.5.2.2. in width, by two vertical planes which form an angle of 15° outwards from a plane perpendicular to the vehicle's longitudinal axis and which pass through the intersection of the vertical planes perpendicular to the vehicle's longitudinal axis delimiting the vehicle's overall length and the extreme outer edge of the vehicle.

6.21.6. Orientation

6.21.6.1. To the side:

As close as practicable to being parallel to the median longitudinal plane of the vehicle, compatible with the shape, structure, design and operation requirements of the vehicle.

6.21.6.2. To the rear:

As close as practicable to being parallel to the transverse plane of the vehicle, compatible with the shape, structure, design and operation requirements of the vehicle.

6.21.7. Other requirements

6.21.7.1. Conspicuity markings shall be considered continuous if the distance between adjacent elements are as small as possible and do not exceed 50 per cent of the shortest adjacent element length.

6.21.7.2. In the case of a partial contour marking, each upper corner shall be described by two lines at 90° to each other and each at least 250 mm in length.

- 6.21.7.3. The distance between the conspicuity marking fitted to the rear of a vehicle and each mandatory stop lamp should be greater than 200 mm.
- 6.21.7.4. Where rear marking plates conforming to the 01 series of amendments to Regulation No. 70 are installed these may be considered, at the discretion of the manufacturer, as part of the conspicuity marking to the rear, for the purposes of calculating the length of the conspicuity marking and its proximity to the side of the vehicle.
- 6.21.7.5. The locations on the vehicle designated for conspicuity markings shall allow for the installation of markings of at least 60 mm in width.