



Authorised Vehicle Wrapper
Graphics Products



ECE Regulations

for heavy goods vehicles

ECE 48 & 104

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO THE INSTALLATION OF LIGHTING AND LIGHT-SIGNALLING DEVICES

6.21. CONSPICUITY MARKINGS (Regulation No. 104 (within Regulation No. 48))

6.21.1. Presence

6.21.1.1. Prohibited: on vehicles of categories M1 and O1.

6.21.1.2. Mandatory:

6.21.1.2.1. To the rear:

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

N2 with a maximum mass exceeding 7.5 tonnes and N3 (with the exception of chassis-cabs, incomplete vehicles and tractors for semi-trailers);
O3 and O4.

6.21.1.2.2. To the side:

6.21.1.2.2.1. Partial contour marking on vehicles exceeding 6,000mm in length of the following categories:

N2 with a maximum mass exceeding 7.5 tonnes and N3 (with the exception of chassis-cabs, incomplete vehicles and tractors for semi-trailers);
O3 and O4.

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 manufacturer 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 or, if this is not possible in case of especially difficult vehicle designs or applications, to at least 40 per cent and shall be indicated in the communication document and test report. 15/
15/ This provision does apply until 5 years after the official date of entry into force of the 03 series of amendments to this Regulation.

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 600mm of each end of the vehicle (or cab in the case of 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 manufacturer 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 or, if this is not possible in case of especially difficult vehicle designs or applications, to at least 40 per cent and shall be indicated in the communication document and test report. 15/

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 250mm above the ground.

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

However, a maximum mounting height of 2,100mm may be accepted where technical conditions prevent compliance with the maximum value of 1,500mm 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 400mm 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, fig. 1) the observation plane is perpendicular to the longitudinal axis of the vehicle situated 25m from the extreme end of the vehicle and bounded by:

6.21.5.1.1. In height, by two horizontal planes 1 m and 3.0m 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, fig. 2) the observation plane is parallel to the longitudinal median plane of the vehicles situated 25m from the extreme outer edge of the vehicle and bounded by:

6.21.5.2.1. In height, by two horizontal planes 1m and 3m 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 250mm 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 200mm.

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 60mm in width.

See also, regulation 104 which is:

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF RETRO-REFLECTIVE MARKINGS FOR VEHICLES OF CATEGORY M, N AND O

Regulation 104 should be met by the manufacturer when producing high visibility safety marking tapes. You can fit any marking material approved by regulation 104. The certification approval process for conspicuity products is done to ensure they meet requirements for colour, reflectivity and durability set out in regulation ECE 104. The E mark as shown, is a proof that the product has been tested, certified and meets all the requirements of ECE 104. Without the E-mark, the product is not compliant with the regulation. Ensure when purchasing material to comply with these regulations that it is marked with an E as shown.

