



## What is ECE104?

**ECE104 is a regulation that establishes guidelines for the use of retro-reflective safety markings on heavy goods vehicles operating throughout Europe.**

Since July 2011, all newly registered HGVs over 7.5 tonnes and trailers over 3.5 tonnes operating in the UK, are required by law to be fitted with homologated retro-reflective markings. These must clearly outline the rear and sides of the vehicle to make it visible for up to 1000 metres in low light conditions. ECE104 specifies the standard for the reflective materials used and where and how it must be positioned on the vehicle or trailer.

## Vehicle Safety Markings for ECE104

Vehicle Safety Markings required under ECE104 must carry the “E-mark” to show that the tape has met the minimum requirements of the regulation. The markings need to be between 50mm to 60mm.

## What colour markings can be used?

| Position on vehicle | Colours         |
|---------------------|-----------------|
| Front               | White           |
| Sides               | Yellow or white |
| Rear                | Red or yellow   |

\*The Department for Transport states that UK preference for colours is yellow to the side and red to the rear.

# Application options

## Rear of the vehicle:

- A complete contour line marking (box) needs to be applied if the rear of the vehicle is wider than 2100mm
- The conspicuity marking should be as close as practicable to the edge of the vehicle and should equate to at least 80% of the overall width of the vehicle

## Side of the vehicle:

- There are two options to choose from, a complete contour line marking (box) or a partial contour marking (corner ticks)
- Partial contour markings are the minimum requirement
- The conspicuity markings shall equate to at least 80% of:
  - The length of the vehicle (excluding the cab)
  - The length of the trailer (excluding the drawbar)
- The length of the upper corner marking tape must be a minimum of 250mm in each direction

## Full markings



## Partial markings



## Why choose 3M Vehicle Marking Tape?

- Excellent reflectivity
- Ease of application
- Daytime appearance – bright, vibrant colours
- Excellent adhesion to vehicles – product bonds well to the selected substrates and endure after outdoor exposure and frequent washing and cleaning
- High quality, durable, all plastic construction – not susceptible to corrosion

## 3M™ Product Range – ECE104 approved

| Features   | 3M™ Diamond Grade™ Vehicle Marking Tape Series 983 | 3M™ Diamond Grade™ Vehicle Marking Tape Series 983S               | 3M™ Diamond Grade™ Vehicle Marking Tape Series 997   | 3M™ Diamond Grade™ Vehicle Marking Tape Series 997S          | 3M™ Vehicle Marking Tape Series 943          |
|--|--|---|--|--|--|
| Typical use  | For application on rigid-sided vehicles            | Segmented tanker stickers for application on rigid-sided vehicles | For application on curtain-sided vehicles            | Segmented markings for application on curtain-sided vehicles | For application on rigid-sided vehicles      |
| Suitable application surfaces and substrates       | Aluminium, stainless steel, automotive paint       | Aluminium, stainless steel, automotive paint                      | 3M approved coated curtains, not older than 6 months | 3M approved coated curtains, not older than 6 months         | Aluminium, stainless steel, automotive paint |
| Maximum warranty                                   | 8 Years  | 8 Years   | 3 Years  | 3 Years  | 5 years                                      |
| Standard colour range                              | White, yellow & red                                | White, yellow & red   | White, yellow & red                                  | White, yellow & red  | White, yellow & red                          |
| Adhesive   | Clear, pressure sensitive                          | Clear, pressure sensitive   | Clear, pressure sensitive                            | Clear, pressure sensitive                                    | Clear, pressure sensitive                    |
| Product construction                               | Prismatic construction                             | Segmented prismatic construction                                  | Flexible, prismatic construction                     | Flexible, segmented prismatic construction                   | Metallised                                   |
| Roll size  | 55mm x 50m   | 50mm x 50m  | 52mm x 50m   | 51mm x 50m   | 51mm x 50m                                   |
| ECE104 compliant & E-mark                          | Yes (104 R – 00821)                                | Yes (104 R – 00821)   | Yes (104 R – 003189)                                 | Yes (104 R – 003189)   | Yes (104 R - 003994)                         |
| Application temperature range of air and substrate | 10°C – 30°C  | 10°C – 30°C   | 10°C – 30°C  | 10°C – 30°C  | 10°C – 30°C                                  |

### Transportation Safety Division

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