# 3M Traffic Safety Systems

3M™ Diamond Grade™ Vehicle Marking Film Series 983
3M™ Diamond Grade™ Vehicle Marking Film Series 997
3M™ Diamond Grade™ Vehicle Marking Film Series 997S

# Powerful protect against collision

## What is ECE104?

ECE104 is a regulation that establishes guidelines for the use of retro-reflective safety markings on heavy goods vehicles operating on our roads. It has already been introduced in a number of European countries.

If you own, operate, sell or service any goods vehicle over 7.5 tonnes or trailers over 3.5 tonnes then you need to know about this piece of legislation.

## When was it introduced?

The regulation has neen mandatory since July 2011 for all newly registered HGVs over 7.5 tonnes and trailers over 3.5 tonnes.

The markings clearly outline the rear and sides of the vehicle making it visible for up to 1000 metres at night. Studies and field tests conducted over a 10 year period show that well marked trucks are 30 times less likely to be involved in a road traffic accident, compared with unmarked ones[1]. Other drivers are able to notice marked trucks 5 to 8 times faster, allowing for considerably longer reaction time[2].

## Why apply conspicuity markings?

- Help to reduce accidents and save lives
- Improve safety and increase visibility of vehicles
- Reduced accidents means less downtime and decreased repair costs
- Improve corporate image through being more proactive about safety
- Protect your company against potential legal action related to third party safety
- Employee satisfaction that the company is proactive about safety
- To meet the regulatory requirements of ECE104 from July 2011.

"3M reflective markings certainly help with road safety. They a
potential savings to human life that the increased visibility of

Dave

[1] Technical University of Darmstadt, Germany, 2004 [2] Ludwig Boltzman Institute, Vienna, Austria, 2002

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## 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.

There are two options to choose from, a complete contour line marking or a partial contour marking. Partial contour markings are the minimum requirement.

Contour markings should cover at least 80% of the total length and width of the vehicle/trailer and should be as close as practicable to the edges. A combination of marked and unmarked vehicles/trailers is discouraged.

### Full Contour Markings

### Partial Contour Markings

## What material is recommended?

3M offer a complete range of ECE104 compliant retro-reflective vehicle safety markings products for rigid and curtain sided heavy goods vehicles. All three products in the range offer superb long distance night time reflectivity and visibility. In addition, the tapes are extremely durable, easy to handle & cut and can be applied by one person. 3M tapes are non metallised so there is no risk of corrosion.

| Features | 3M™ Diamond Grade™ Vehicle Marking Film Series 983 | 3M™ Diamond Grade™ Vehicle Marking Film Series 997 | 3M™ Diamond Grade™ Vehicle Marking Film Series 997S |
|---|---|---|---|
| **Typical Use** | For application on rigid surfaces | For application on curtain-sides | For application on curtain-sides |
| **Suitable Application Surfaces and Substrates** | Aluminium, stainless steel, automotive paint | 3M approved coated curtains, not older than 6 months | 3M approved coated curtains, not older than 6 months |
| **Maximum Warranty** | 8 Years | 3 Years | 3 Years |
| **Standard Colour Range** | White, red and yellow | White, red and yellow | White, red and yellow |
| **Adhesive** | Clear, pressure sensitive | Clear, pressure sensitive | Clear, pressure sensitive |
| **ECE104 Compliant** | Yes | Yes | Yes |
| **Product Construction** | Highly reflective prismatic construction | Highly reflective, flexible, prismatic construction | Highly reflective, flexible, segmented prismatic construction |
| **Roll Size** | 55mm x 50m | 52mm x 50m | 51mm x 50m |
| **E-Mark** | Yes (104 R – 00821) | Yes (104 R-003189) | Yes (104 R-003189) |
| **Application** | Quickly and easily applied | Quickly and easily applied | Quickly and easily applied |

are well worth the investment when you think of the
the vehicle could result in.

Parkes, National Fleet Engineer, Walkers Snacks Ltd

## What vehicles are affected?

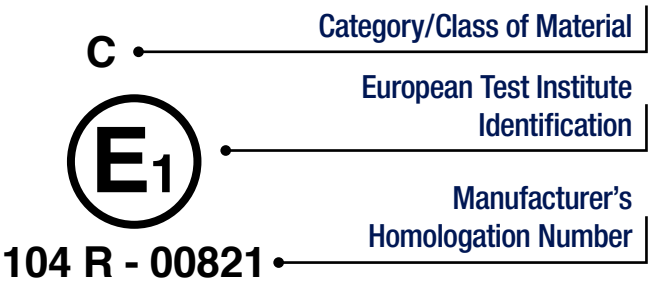
| | Categories of vehicles covered by the regulation<br>*Vehicles exceeding: 2100mm in width*<br>*Vehicles exceeding: 6000mm in length* | Newly Registered since July 2011 |
|---|---|---|
| N | Vehicles with at least 4 wheels designed and constructed for the carriage of goods | |
| N2 | Maximum mass exceeding 7.5 tonnes but not exceeding 12 tonnes | ✔ |
| N3 | Maximum mass exceeding 12 tonnes | ✔ |
| O | Trailers (including semi-trailers) | |
| O3 | Maximum mass exceeding 3.5 tonnes but not exceeding 10 tonnes | ✔ |
| O4 | Maximum mass exceeding 10 tonnes | ✔ |

## What is the E-Mark?

Without the E-Mark, the product is not compliant with the regulation. Category C (Contour) materials are the brightest materials for vehicle markings. With a brightness of 300-450 cd/lx.m$^2$, these films may only be used for contour (safety/conspicuity) markings.

ECE104 compliant retro-reflective materials are identified with an E-mark symbol. The symbol is proof that the products have been tested and certified by an independent and authorised centre and meet all the requirements of ECE104.

**For further information on ECE104, where to buy and 3M product range visit: 3M.co.uk/traffic/ECE104 or call: 0800 032 9597**



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