



Truck and Trailer Markings

Full range of reflective solutions for ECE 104 compliancy

ORAFOL is your full range supplier of ECE 104 compliant materials

As one of the world's leading suppliers of reflective materials, the ORAFOL Group earned its reputation for global excellence through its dedication to ingenuity, quality and service. When it comes to supplying products for the vehicle conspicuity industry, we work each day with a dedication grounded by our knowledge that the quality of our products helps save lives.

ORAFOL is the leading manufacturer of ECE 104 compliant marking materials. The range of products has been specifically designed for long-lasting top quality performance.

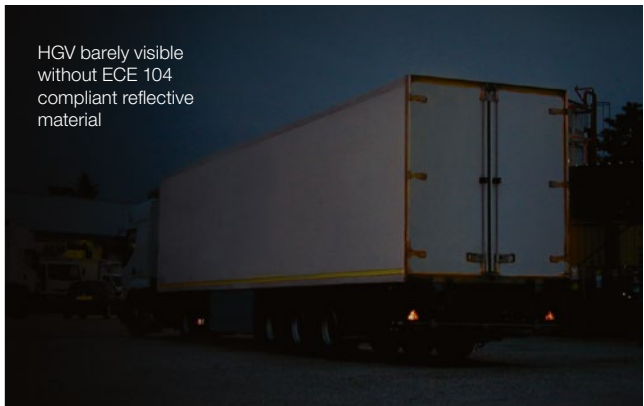
The range includes solutions for all kinds of vehicles including applications onto rigid bodies, circular tanker shapes as well as curtain sides. Whatever the need, ORAFOL has a solution to keep you and others safe on the road.

“

Research shows that conspicuity markings can reduce crashes in low light conditions involving HGVs by up to 41%*

**Source: The US National Highway Traffic Safety Administration (NHTSA)*

HGV barely visible without ECE 104 compliant reflective material



HGV clearly visible with ORALITE® VC 104+ material



ECE 104 Regulation

Since 10 July 2011 conspicuity markings have been compulsory for new type approved trucks with a tonnage over 7,5 tonnes (N2 and N3) and for trailers with a tonnage of more than 3,5 tonnes (O3 and O4).

Reflective materials which must comply with regulation ECE 104 of the United Nations Economic Commission for Europe (UNECE) have to be applied to the sides and rear of all relevant vehicles.

As the inventor of microprismatic retroreflective technology primarily mandated for ECE 104 markings, ORAFOL's materials have been setting the standard for HGV visibility performance since the early 1990s.

Being seen is being safe.

ECE 104 Regulation Overview

M	Motor vehicles used for the transport of passengers	Mandatory since 10th July 2011*	Allowed	Not allowed
M1	Motor vehicles used to transport passengers with no more than 8 seats in addition to the driver's seat	-	-	✗
M2	Motor vehicles used to transport passengers with more than 8 seats with a maximum weight of 5 tonnes	-	✓	-
M3	Motor vehicles used to transport passengers with more than 8 seats and with more than 5 tonnes in weight	-	✓	-
N	Motor vehicles used for the carriage of goods	Mandatory since 10th July 2011*	Allowed	Not allowed
N1	Motor vehicles used for the carriage of goods with a maximum weight of 3,5 tonnes	-	✓	-
N2	Motor vehicles used for the carriage of goods with a weight over 3,5 tonnes but not exceeding 7,5 tonnes	-	✓	-
N2	Motor vehicles used for the carriage of goods with a weight exceeding 7,5 tonnes	✓	✓	-
N3	Motor vehicles used for the carriage of goods with a weight exceeding 12 tonnes	✓	✓	-
O	Trailers	Mandatory since 10th July 2011*	Allowed	Not allowed
O1	Trailers with a maximum weight not exceeding 0,75 tonnes	-	-	✗
O2	Trailers with a weight exceeding 0,75 tonnes but no more than 3,5 tonnes	-	✓	-
O3	Trailers with a weight exceeding 3,5 tonnes but no more than 10 tonnes	✓	✓	-
O4	Trailers exceeding 10 tonnes in weight	✓	✓	-

*) For new registrations



ECE 104 Class C - For Rigid Surfaces

Approved marking tape for rigid surfaces

ORALITE® VC 104+ Rigid Grade

Product benefits include:

- Approved to ECE 104 Class C
- Easy to handle and apply
- No need to edge seal
- Robust enough to withstand cleaning processes including power washing
- No risk of the tape cracking
- Excellent long range visibility even in poor weather conditions
- Also available as VC 104+ Rigid Grade Imagine, customised with your logo repeated along the tape
- 10 year durability



Product	Colour range	Approved to	Roll sizes
ORALITE® Rigid Grade	Yellow, white, red	ECE 104 class C	50 mm x 50 m
ORALITE® VC 104+ Rigid Grade Imagine	Yellow, white, red	ECE 104 class C	50 mm x 50 m

Easy to peel pre-cut stickers, especially suitable for rear marking of tankers

ORALITE® VC 104+ Tanker Stickers

Product benefits include:

- Same superior performance as ORALITE® VC 104+ Rigid Grade
- Approved to ECE 104 Class C
- Pre-cut in 160 mm long labels for easy application
- Ideal solutions for circular applications



Product	Colour range	Approved to	Roll sizes
ORALITE® VC 104+ Tanker Stickers	Yellow, white, red	ECE 104 class C	50 mm x 50 m pre-cut into 160 mm labels



Application examples for ORALITE® VC 104+.

ECE 104 Class C - For Curtains

Approved marking tape for curtain surfaces

ORALITE® VC 104+ Curtain Grade

Product benefits include:

- Approved to ECE 104 Class C
- Unique vinyl construction for great flexibility
- Easy to handle and apply
- Easy to cut with no edge sealing required
- The tape flexes and stretches with the curtain
- Resistant to power washing
- Excellent long range visibility even in poor weather conditions
- Also available as ORALITE® VC 104+ Curtain Grade Imagine, customised with your logo repeated along the tape
- 3 year durability when applied to new curtains



Product	Colour range	Approved to	Roll sizes
ORALITE® VC 104+ Curtain Grade	Yellow, white, red	ECE 104 class C	50 mm x 50 m
ORALITE® VC 104+ Curtain Grade Imagine	Yellow, white, red	ECE 104 class C	50 mm x 50 m

Segmented approved marking tape for curtain surfaces

ORALITE® VC 104+ Curtain Grade Segmented

Product benefits include:

- Same superior performance as ORALITE® VC 104+ Curtain Grade
- Approved to ECE 104 Class C
- Supplied on a continuous roll as pre-cut in labels each 48 mm x 50 mm (with 6 mm spacing between segments)
- Easy to handle and apply



Product	Colour range	Approved to	Roll size
ORALITE® VC 104+ Curtain Grade Segmented	Yellow, white, red	ECE 104 class C	50 mm x 50 m, pre-cut in labels 48 mm x 50 mm



Application examples for ORALITE® VC 104+.

Fleet Engineer Grade

ORALITE® 5650D RA

Class D applications for rigid surfaces – with *RapidAir*® for easy application

Product benefits include:

- Approved to ECE 104 class D (the material is watermarked)
- Flexible reflective film for vehicle livery with a special cast PVC top film
- *RapidAir*® construction for easy application
- 11 colours
- 100% splice free
- Permanent adhesive with good repositioning properties
- Durability: 7 years
- Excellent printability (solvent based ink jet printing, UV or Latex inks, screen printing)

Product	Colour range	Approved to	Roll sizes*
ORALITE® 5650D RA	White, yellow, red, orange, blue, green, black, azure, gold, lemon and ruby	ECE 104 class D	610 mm x 25 m 610 mm x 50 m 1220 mm x 25 m 1220 mm x 50 m

*In addition white is available in the following widths: 760 mm, 1370 mm and 1520 mm

Fleet Marking Grade

ORALITE® 5650E RA

Class E applications for rigid surfaces – with *RapidAir*® for easy application

Product benefits include:

- Approved to ECE 104 class E (the material is watermarked)
- Flexible reflective film for vehicle livery with a special cast PVC top film
- *RapidAir*® construction for easy application
- 11 colours
- 100% splice free
- Permanent adhesive with good repositioning properties
- Durability: 7 years
- Excellent printability (solvent based ink jet printing, UV or Latex inks, screen printing)

Product	Colour range	Approved to	Roll sizes*
ORALITE® 5650E RA	White, yellow, red, orange, blue, green, black, azure, gold, lemon and ruby	ECE 104 class E	610 mm x 25 m 610 mm x 50 m 1220 mm x 25 m 1220 mm x 50 m

*In addition white is available in the following widths: 760 mm, 1370 mm and 1520 mm



Fleet Marking Grade

ORALITE® 5600E

Class E applications for rigid surfaces

Product benefits include:

- Approved to ECE 104 class E (the material is watermarked)
- Flexible reflective film for vehicle livery with a special cast PVC top film
- 11 colours
- 100% splice free
- Durability: 7 years
- Excellent printability (solvent based ink jet printing, UV or Latex inks, screen printing)

Product	Colour range	Approved to	Roll sizes*
ORALITE® 5600E	White, yellow, red, orange, blue, green, black, azure, gold, lemon and ruby	ECE 104 class E	610 mm x 25 m 610 mm x 50 m 1220 mm x 25 m 1220 mm x 50 m

*In addition white is available in the following widths: 760 mm, 1370 mm and 1520 mm

Where should the conspicuity tapes be applied?

To the rear: here a full contour marking is required, i.e. a full 'box'.

To the sides: Here you can choose to do either a full contour ('box') marking, or a line marking of the length of the vehicle plus marking of the upper corners if the design of the vehicle allows for this. Minimum 80% of the length of the vehicle (excluding the length of the cabin) must be marked.

The lower line of the marking tape must be placed minimum 25 cm from the ground and in a height of maximum 150 cm. This can in special cases be extended to 250 cm.

The length of the upper corner markings must be minimum 25 cm. Upper corner markings should be applied as high as practical, but within 40 cm of the upper extremity of the vehicle. In cases where a top corner marking is not possible due to the construction of the vehicle, a line marking on its own is allowed. It is a good idea to mark also the tractor (e.g. on the door) to visually get a marking of the full length of the vehicle, however this is not an obligation.

The range includes solutions for all kinds of vehicles including applications onto rigid bodies, circular tanker shapes as well as curtain sides. Whatever the need, ORAFOL has a solution to keep you and others safe on the road.

