

## Product Description

The weatherproof, self-adhesive, retroreflective ORALITE® reflective films series 5600E FLEET MARKING GRADE boast high flexibility combined with excellent corrosion and solvent resistance. The retroreflective system of the ORALITE® reflective films series 5600E FLEET MARKING GRADE consists of catadioptric glass beads which are embedded in a transparent layer of plastic material (design A, formerly Type I).

The ORALITE® reflective films series 5600 E FLEET MARKING GRADE comply with ECE Regulation No. 104 for material class E. The reflective material displays an approval (water mark) applied every 100mm. The approval mark shows the material class (E), the ECE regulation number (104) and the approval number (002246).

## Retroreflectivity

The ORALITE® reflective films series 5600 E FLEET MARKING GRADE comply with ECE Regulation No. 104 for material class E. The reflective material displays an approval mark (water mark) every 100 mm. The approval mark shows the material class (E), the ECE regulation number (104) and the approval number (002246).

## Adhesive

The adhesive consists of a solvent polyacrylate, permanent pressure sensitive adhesive. The release paper (145 g/m<sup>2</sup>) has a PE coating applied to silicone-coated paper on either side. As the product and batch number are applied to the silicone-coated paper, all production parameters and raw materials can be completely traced.

## Application/Processing

ORALITE® reflective films series 5600 FLEET ENGINEER GRADE were especially developed for high quality car wrappings to produce lettering, markings and decorations which may be applied within contour markings in accordance with ECE 104. They are suitable for use on cutting plotters and provide good adaptability including to corrugations and rivets.

ORALITE® 5600E can be screen printed with ORALITE® 5018 screen printing ink or inkjet printed with most solvent based inks, UV- or Latex inks. Please refer to the chosen ink manufacturer's instructions to determine if an application laminate is required. If required, it is recommended that the material is laminated with ORALITE® 5051, ORAGUARD® 290F or ORAGUARD® 293F in order to provide increased UV protection. When using non-ORAFOL inks or printers, the application must be tested and approved by the customer.

While the use of heat will help to partially remove the product, a solvent based adhesive remover maybe required to completely remove any residual adhesive.

Please refer to the Practical Information published by ORAFOL for full instructions or contact your ORAFOL Reflective Solutions Division representative for advice relating to the above.

**Note:** All ORALITE® products are manufactured within an ISO 9001:2015 controlled manufacturing environment & batch traceability is possible on the basis of the roll number.

## Product Data

Maximum Values for the coefficient of retroreflection (according to ECE 104, material class E)

Specific coefficient of retroreflection (cd/lx/m <sup>2</sup> )				
Observation angle	0.33°			
Entrance angle	5°	30°	40°	60°
All colours	50	21.66	12.33	1.66

## Colours

ORALITE® 5600E is available in 11 different colours.

5600E – 010 white

5600E – 020 yellow

5600E – 030 red

5600E – 035 orange

5600E – 050 blue

5600E – 060 green

5600E – 070 black (When being illuminated in darkness, it appears silver to silver-grey.)

5600E – 084 azure

5600E – 091 gold

5600E – 213 lemon

5600E – 364 ruby

## Physical and Chemical Properties

<b>Thickness*</b> (without protective paper and adhesive)	110 micron (4.4 mils)
<b>Temperature resistance***</b>	adhered to aluminium, -50° C to +95° C (-58° F to 203° F)
<b>Adhesive power*1</b> (FINAT-TM1 after 72h)	adhered to stainless steel: 17.0 N/25 mm (1 inch) adhered to acrylic coating: 17.5 N/25 mm (1 inch)
<b>Tensile Strength</b> (DIN 53455)	along: min 10 N/mm <sup>2</sup> across: min 10 N/mm <sup>2</sup>
<b>Elongation at break</b> (DIN 53455)	along: min 100% across: min 100%
<b>Shelf life**</b>	2 years
<b>Application temperature</b>	> 15° C (60° F)
<b>Service life by specialist application***</b> under vertical outdoor exposure	7 years

\* Average value

\*\* in original packaging, at 20° C and 50% relative humidity

\*\*\* standard central European climate

**Note:** Values stated in SI units are to be regarded as standard. The values in parentheses are conversions and shall not be considered as the standard, as these values maybe approximate.

## IMPORTANT NOTICE

When using ORALITE® sheeting the relevant national specifications have to be complied with. ORAFOL recommends you obtain the current requirements from your local authority and ensure product conformance with such requirements. Please contact ORAFOL for further information.

All ORALITE® products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning ORALITE® products is based upon research which the Company believes to be reliable although such information does not constitute a warranty. Because of the variety of uses of ORALITE® products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. All specifications are subject to change without prior notice.

No warranty is given for purposes other than those listed in the Technical Datasheet or which are not processed according to ORAFOL's processing and handling instructions. The durability of the signs will depend on a variety of factors, including but not limited to substrate selection and preparation, compliance with recommended application guidelines, geographic area, exposure conditions and maintenance of the product and finished sign. Sign failures caused by the substrate or improper surface preparations are not the responsibility of ORAFOL. Please refer to the full warranty document available at [www.orafol.com](http://www.orafol.com) for detailed information.

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