

### Product Description

ORALITE® reflective film series 5600 FLEET ENGINEER GRADE is a tough weather and solvent resistance product which boasts high flexibility combined with excellent corrosion resistance. The material is plotter cuttable and is especially developed for high-quality commercial and fleet livery to produce lettering, markings and decorations. The material can be applied to moderately curved surfaces with rivets or corrugated substrates, due to its special cast PVC construction.

ORALITE® 5600 is composed of catadioptric glass beads which are embedded in a transparent layer of plastic material (design A, formerly Type I).

### Retroreflectivity

ORALITE® 5600 meets the performance requirements of ECE 104 class D and is available as 5600D product with watermark. Values of retroreflection as shown in Table 1 are complied with when measured in accordance with the corresponding specifications using CIE standard illuminant A, and the provisions of CIE No.54.2.

### Color

ORALITE® 5600 is available in 15 different colors (see table 1 for full list of available colors). ORALITE® 5600-070 displays a black color at daylight. When being illuminated in darkness, it appears silver to silver-grey.

### 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® 5600 FLEET ENGINEER GRADE was especially developed for high-quality commercial and fleet livery. Surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination which could affect the adhesion of the material. Freshly lacquered or painted surfaces should be completely cured. The compatibility of selected lacquers and paints should be tested by the user, prior to application of the material. The self adhesive reflective material can only be used for dry application. For other applications the user is fully responsible for evaluating the suitability of the product, and for any risks associated with that use.

ORALITE® 5600 can be screen printed with ORALITE® 5018 screen printing ink or inkjet printed with 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 ORAGUARD® 290F or ORAGUARD® 293F in order to provide increased UV protection.

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 9001:2008 controlled manufacturing environment & batch traceability is possible on the basis of the roll number.

### IMPORTANT NOTICE

All Reflexite® and 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 Reflexite® and 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 Reflexite and 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. ORALITE® is a trademark of ORAFOL Europe GmbH.

### Product Data

Typical Values for the coefficient of retroreflection (measured according to DIN 67520 and EN 12899-1). For 5600D labeled products, this reflects the minimum values of retroreflection.

Table 1: Specific coefficient of retroreflection (cd/lx/m <sup>2</sup> )					
Observation angle		0.2°		0.33°	
Entrance angle		5°	30°	5°	30°
white	(010)	100	40	80	35
yellow	(020)	60	25	45	20
red	(030)	18	8	15	6
orange	(035)	27	10	23	8
violet	(040)	20	8	16	6
blue	(050)	5	1.7	4	1
light blue	(053)	45	16	35	12
turquoise	(054)	33	12	24	8
green	(060)	13	5	11	5
black	(070)	35	15	30	10
brown	(080)	5	2	3	1
azure	(084)	9	4	7	2.5
gold	(091)	70	27	50	22
lemon	(213)	75	30	55	25
ruby	(364)	10	5	8	4

### Physical and Chemical Properties

<b>Thickness*</b> (without protective paper and adhesive)	110-140 micron (4.3 – 5.5 mils)
<b>Temperature resistance***</b>	adhered to aluminium, -50°C to +95°C (-58°F to 203°F)
<b>Adhesive power*<sup>1</sup></b> (FINAT-TMI after 72h)	adhered to stainless steel:17.0 N/25mm (1 inch) adhered to acrylic coating:17.5 N/25mm (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>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 <sup>1</sup> 180° Peel @ 300mm (12")/min

**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 may be approximate.

