

# ORALITE® 5500 COMMERCIAL GRADE

Technical data sheet

07/27

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## Description

ORALITE® - Reflective films Series 5500 COMMERCIAL GRADE are weatherproof, self-adhesive retroreflective films with an excellent corrosion and solvent resistance.

The retroreflective system of the ORALITE® - Reflective films Series 5500 COMMERCIAL GRADE consists of catadioptric glass beads which are embedded in a transparent layer of plastic material. The smooth surface shows a high scratch resistance and impact strength, and a very good printability.

The reflective data and colours at daylight comply with the international specifications for reflective materials of this class, such as DIN 67520 and DIN 6171 (Germany), BS 873: Part 6 (Great Britain), NFP 98-520 (France), SN 640878 (Switzerland), ASTM D 4956 (US), JIS Z 9117 (Japan).

## Front material

Alkyd resin with embedded micro-glass beads

## Release paper

PE-coated silicone paper, 145g/m<sup>2</sup>.

As the product and batch number are applied to the silicone-coated paper, all production parameters and raw materials can be completely traced back.

## Adhesive

Solvent polyacrylate, permanent

## Area of use

ORALITE® - Reflective films Series 5500 COMMERCIAL GRADE were especially developed for the manufacture of traffic control and guidance signs, warning signs and information signs as well as for reflective lettering, numbers and symbols, which are intended for a medium-term outdoor use (5 years).

When using the ORALITE® - Reflective films Series 5500 COMMERCIAL GRADE, the particular national specifications have to be complied with.

## Printing method

The use of ORALITE® - Screen printing inks Series 5010 is recommended.

A transparent coating is not necessary.

## Technical data

**Minimum reflection data:** (DIN 67520, Part 1 and Part 2, state as manufactured)

Observation angle Entrance angle	Specific coefficient of retroreflection R' in cd / lx per m <sup>2</sup>			
	0,2°		0,33°	
	5°	30°	5°	30°
white 010	70	30	50	24
yellow 020	50	22	35	16
orange 035	25	10	20	8
red 030	14,5	6	10	4
green 060	9	3,5	7	3
blue 050	4	1,7	2	1
brown 080	1	0,3	0,7	0,2
black 070	25	10	20	8

The statements in this information sheet are based upon our knowledge and practical experience. This data is intended only as a source of information and is given without guarantee and does not constitute a warranty. Due to the wide variety of possible uses and applications customers should independently determine the suitability of this material for their specific purpose, prior to use.



ORAFOL Europe GmbH - Am Biotop 2 - D 16515 Oranienburg  
Telefon: +49 (0) 33 01/864 0 - Telefax: +49 (0) 33 01/864 100  
E-Mail: verkauf@orafol.de - Internet: <http://www.orafol.de>

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**Colours** (DIN 5033 Part 3, DIN 5036 Part 1, DIN 6171, state as manufactured)

		Colour coordinates								Luminance factor $\beta$
		1		2		3		4		
		x	y	x	y	x	y	x	y	
white	010	0,305	0,315	0,335	0,345	0,325	0,355	0,295	0,325	$\geq 0,35$
yellow	020	0,494	0,505	0,47	0,48	0,513	0,437	0,545	0,454	$\geq 0,27$
orange	035	0,61	0,39	0,535	0,375	0,506	0,404	0,57	0,429	$\geq 0,17$
red	030	0,735	0,265	0,7	0,25	0,61	0,34	0,66	0,34	$\geq 0,05$
green	060	0,11	0,415	0,17	0,415	0,17	0,5	0,11	0,5	$\geq 0,04$
blue	050	0,13	0,09	0,16	0,09	0,16	0,14	0,13	0,14	$\geq 0,01$
brown	080	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	$0,03 \leq \beta \leq 0,09$
black	070	Black is the colour at daylight. When being illuminated in darkness, it appears silver t silver-grey.								

<b>Thickness*</b> (without protective paper and adhesive)	125 micron
<b>Temperature resistance</b>	adhered to aluminium, -56°C to +82°C
<b>Salt-water resistance</b> (DIN 50021)	adhered to aluminium, after 100h/23°C no variation
<b>Resistance to solvents and chemicals</b>	with expert application resistant to most oils, grease, fuels, aliphatic solvents, weak acids, salts and alkalis
<b>Resistance to cleaning agents</b>	adhered to aluminium, 8h in washalcalics (0,5% household-cleaning agents) at room temperature and 65°C, no variation
<b>Adhesive power*</b> (FINAT TM 1, after 24h, stainless steel)	15 N/25mm (film tear)
<b>Tensile strength</b> (DIN EN ISO 527)	along: min. 10 MPa across: min. 10 MPa
<b>Elongation at break</b> (DIN EN ISO 527)	along: min. 20% across: min. 20%
<b>Shelf life**</b>	2 years
<b>Minimum application temperature</b>	> +15°C
<b>Service life by specialist application</b> under vertical outdoor exposure (standard central European climate)	5 years (not printed)

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

### Attention:

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 allowed to dry for at least three weeks and to completely cure respectively. The compatibility of selected lacquers and paints should be tested by the user, prior to application of the material.

The selfadhesive reflective material can only be used for dry application. The low tensile strength of the material can make the removability of the reflective film more difficult. Furthermore the application information published by ORAFOL is to be considered.

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 Telefon: +49 (0) 33 01/864 0 - Telefax: +49 (0) 33 01/864 100  
 E-Mail: verkauf@orafol.de - Internet: <http://www.orafol.de>