

# ORALITE®

## 5810 HIGH INTENSITY GRADE

Technical data sheet

08/09

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### Description

ORALITE® retroreflective films series 5810 HIGH INTENSITY GRADE are highly reflective, weatherproof, self-adhesive films with excellent corrosion and solvent resistance. The smooth surface of ORALITE® reflective films series 5810 HIGH INTENSITY GRADE allows a very good printability. The retroreflective system of the ORALITE® reflective films series 5810 HIGH INTENSITY GRADE consists of encapsulated catadioptric glass beads. ORALITE® reflective films series 5810 HIGH INTENSITY GRADE contain an identification water mark. The reflective data and colors at daylight comply with the international specifications of this class such as EN 12899-1 (European Regulation), 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

Acrylic film

### Adhesive

Solvent polyacrylate, permanent

### Release paper

Polypropylene film, silicone coated on one side, 0,075 mm

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

### Area of use

ORALITE® reflective films series 5810 HIGH INTENSITY GRADE were especially developed for the manufacture of traffic control and guidance signs, warning and information signs, which are intended for long-term outdoor use (10 years). The special structure of the cells allows the identification of the film manufacturer.

When using the ORALITE® reflective films series 5810 HIGH INTENSITY GRADE, the particular national specifications have to be complied with.

### Printing method

The use of ORALITE® - Screen printing ink 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°			2°		
	5°	30°	40°	5°	30°	40°	5°	30°	40°
white 010	250	150	110	180	100	95	4	2,4	1,4
yellow 020	170	100	70	122	67	64	3	1,5	1
orange 035	100	60	29	62	40	22	1,5	0,8	0,7
red 030	45	25	15	25	14	13	0,8	0,4	0,3
green 060	45	25	12	21	12	11	0,6	0,3	0,2
blue 050	20	11	8	14	8	7	0,2	0,1	
brown 080	3,5	1,5	1	2,5	1				

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.



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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	$\geq 0,27$
yellow	020	0,494	0,505	0,47	0,48	0,513	0,437	0,545	0,454	$\geq 0,16$
orange	035	0,61	0,39	0,535	0,375	0,506	0,404	0,57	0,429	$\geq 0,14$
red	030	0,735	0,265	0,7	0,25	0,61	0,34	0,66	0,34	$\geq 0,03$
green	060	0,11	0,415	0,17	0,415	0,17	0,5	0,11	0,5	$\geq 0,03$
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	$0,03 \leq \beta \leq 0,09$

<b>Thickness*</b> (without protective paper and adhesive)	250 micron
<b>Temperature resistance</b>	adhered to aluminium, -56°C to +82°C (-69°F to 180°F)
<b>Salt-water resistance</b> (DIN 50021)	adhered to aluminium, after 100h at 23°C (74°F) 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 (25mm = 0,98in) (film tear)
<b>Shelf life**</b>	2 years
<b>Application temperature</b>	> +15°C
<b>Service life by specialist application</b> under vertical outdoor exposure (standard central European climate)	10 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. Furthermore the application information published by ORAFOL is to be considered.

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