

Description

ORALITE® retroreflective films series 5800 HIGH INTENSITY GRADE are highly reflective, weatherproof, self-adhesive films with excellent corrosion and solvent resistance. The smooth surface of ORALITE® reflective films series 5800 HIGH INTENSITY GRADE allows a very good printability. The retroreflective system of the ORALITE® reflective films series 5800 HIGH INTENSITY GRADE consists of encapsulated catadioptric glass beads which are embedded in a transparent layer of plastic material (corresponds to class RA 2, design B, formerly Type II). 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 one side, 0,075 mm

Area of use

ORALITE® reflective films series 5800 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. The ORALITE® 5800 HIGH INTENSITY GRADE has an adhesive with an excellent adhesion on metallic surfaces as aluminium and zinc coated steel plate.

The special structure of the cells allows the identification of the film manufacturer. When using the ORALITE® reflective films series 5800 HIGH INTENSITY GRADE, the particular national specifications have to be complied with.

Printing method

The use of ORALITE® - Screen printing inks 5010 and 5018 is recommended.
A transparent coating is not necessary.

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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 ²								
	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				

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

	Colour coordinates								Luminance factor β
	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	>=0,27
yellow 020	0,494	0,505	0,47	0,48	0,513	0,437	0,545	0,454	>=0,16
orange 035	0,61	0,39	0,535	0,375	0,506	0,404	0,57	0,429	>=0,14
red 030	0,735	0,265	0,7	0,25	0,61	0,34	0,66	0,34	>=0,03
green 060	0,11	0,415	0,17	0,415	0,17	0,5	0,11	0,5	>=0,03
blue 050	0,13	0,09	0,16	0,09	0,16	0,14	0,13	0,14	>=0,01
brown 080	0,455	0,397	0,523	0,429	0,479	0,373	0,558	0,394	0,03<=β<=0,09

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Thickness* (without protective paper and adhesive)	260 micron
Temperature resistance	adhered to aluminium, -56°C to +82°C (-69°F to 180°F)
Salt-water resistance (DIN 50021)	adhered to aluminium, after 100h at 23°C (74°F) no variation
Resistance to solvents and chemicals	with expert application resistant to most oils, grease, fuels, aliphatic solvents, weak acids, salts and alkalis
Resistance to cleaning agents	adhered to aluminium, 8h in washalcalics (0,5% household-cleaning agents) at room temperature and 65°C, no variation
Adhesive power* (FINAT TM 1, after 24h, stainless steel)	> 15 N/25mm (25mm = 0,98in) (film tear)
Shelf life**	2 years
Application temperature	> +10°C
Service life by specialist application 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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