

### Description

ORALITE® 5830 High Intensity Construction Grade is a flexible, highly reflective, weatherproof, self-adhesive film with excellent corrosion and solvent resistance. The smooth surface of ORALITE® 5830 High Intensity Construction Grade allows a very good printability. The retroreflective system of the ORALITE® 5830 High Intensity Construction Grade consists of encapsulated catadioptric glass beads (corresponds to class RA 2, design B, formerly Type II). ORALITE® 5830 High Intensity Construction Grade contains an identification water mark. The reflective data and colours 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, flexible

### Release Paper

Polypropylene film, silicone coated one side, 0.075 mm, with identification watermark

### Adhesive

Solvent polyacrylate, permanent, with an aggressive tack

### Area of Use

ORALITE® 5830 High Intensity Construction Grade materials were especially developed for the manufacture of traffic control and guidance signs, warning, construction, and information signs, which are intended for medium-term outdoor use. Because of its adhesive the films are destined for the application on polyolefinic substrates. The special structure of the cells allows the identification of the film manufacturer. When using the ORALITE® 5830 High Intensity Construction Grade the particular national specifications have to be complied with.

### Printing Method

The use of ORALITE® 5010 and 5018 Screen Printing Inks is recommended. A transparent coating is not necessary.

### Product Data

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

Table 1 – Specific coefficient of retroreflection R' in cd/lx/m <sup>2</sup>									
Observation angle	0.2°			0.33°			2°		
	Entrance angle	5°	30°	40°	5°	30°	40°	5°	30°
<b>white (010)</b>	250	150	110	180	100	95	4	2.4	1.4
<b>yellow (020)</b>	170	100	70	122	67	64	3	1.5	1
<b>red (030)</b>	45	25	15	25	14	13	1	0.4	0.3

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

Colour Coordinates									
Colours	1		2		3		4		Luminance factor β
	X	y	X	y	X	y	X	y	
<b>white (010)</b>	0.305	0.315	0.335	0.345	0.325	0.355	0.295	0.325	≥ 0.27
<b>yellow (020)</b>	0.494	0.505	0.470	0.480	0.513	0.437	0.545	0.454	≥ 0.16
<b>red (030)</b>	0.735	0.265	0.700	0.250	0.607	0.343	0.655	0.345	≥ 0.03

### Physical and Chemical Properties

<b>Thickness*</b> (without protective paper and adhesive)	210 micron
<b>Temperature resistance**</b>	adhered to aluminium, -40° C to +82° C (-68° F to 180° F)
<b>Salt-water resistance (DIN 50021)</b>	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 wash-alkalica (0,5% household cleaning agents) at room temperature and 65° C, no variation
<b>Adhesive power*</b> (FINAT-TM1 after 24h, stainless steel)	15 N/25 mm (25 mm = 0.98 in) (film tear)
<b>Shelf life***</b>	2 years
<b>Application temperature</b>	> +10° C
<b>Service life by specialist application</b> under vertical outdoor exposure (standard central European climate)	5 years (not printed)

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

### Note

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. Furthermore, the application information published by ORAFOL is to be considered. The batch traceability according to ISO 9001 is possible on the basis of the roll number.

### 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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