

### Description

ORALITE® 5821 High Intensity Fleet Marking Grade is a flexible, highly reflective, weatherproof, self-adhesive film with excellent corrosion and solvent resistance. The smooth surface of ORALITE® 5821 High Intensity Fleet Marking Grade allows a very good printability. The retroreflective system of the ORALITE® 5821 High Intensity Fleet Marking 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 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

### Adhesive

Solvent polyacrylate, removable

### Area of Use

ORALITE® 5821 High Intensity Fleet Marking Grade was especially developed for the application of warning signs on cars and the film is removable by heat from lacquered surfaces. The films are made for medium-term outdoor use. The special structure of the cells allows the identification of the film manufacturer. The material is signed with the imprint according to DIN 30710 necessary for warning signs and available both as application kit and rolls. When using the ORALITE® 5821 High Intensity Fleet Marking 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°	40°
<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	0.8	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 $\beta$
	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	$\geq 0.27$
<b>yellow (020)</b>	0.494	0.505	0.470	0.480	0.513	0.437	0.545	0.454	$\geq 0.16$
<b>red (030)</b>	0.735	0.265	0.700	0.250	0.610	0.340	0.660	0.340	$\geq 0.03$

### Physical and Chemical Properties

<b>Thickness*</b> (without protective paper and adhesive)	210 micron
<b>Temperature resistance**</b>	adhered to aluminium, -56° 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-TMI 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

### IMPORTANT NOTE

All ORAFOL products are subject to careful quality control throughout the entire manufacturing process, and it is ensured that they are of merchantable quality and free from manufacturing defects. The information published is based on our analyses and studies and does not constitute any warranted properties or any agreement as to quality. Due to the diverse possibilities of use of ORAFOL products and the constant development of new applications, the buyer should carefully consider the suitability and performance of the product for the respective purpose; it bears all risks associated with such use. No warranty is given for purposes other than those listed in the Technical Data Sheet or for applications that are not processed in accordance with ORAFOL's processing instructions.

The durability of the end product depends upon a variety of factors, including but not limited to substrate selection and preparation, compliance with the recommended application guidelines, geographical area, exposure conditions and maintenance of the ORAFOL material and of the end product. Product defects caused by the substrate or improper surface preparation do not lie within ORAFOL's sphere of responsibility.

When using ORAFOL products, the pertinent national regulations are to be observed. ORAFOL recommends that you obtain the current stipulations from your local authority and ensure that the product meets these requirements. Please contact ORAFOL for further information.

ORALITE® is a trademark of ORAFOL Europe GmbH.

