

Description

ORALITE® 5300 Commercial Grade are weatherproof, self-adhesive retroreflective films with an excellent corrosion and solvent resistance. The retroreflective system of the ORALITE® 5300 Commercial Grade consists of catadioptric glass beads which are embedded in a transparent layer of plastic material (class RA1, design A, formerly Type I). The smooth surface shows a high scratch resistance and impact strength, and a very good printability. The reflective data comply with EN 12899-1 (Europe), the colours at daylight with the international specifications for reflective materials of this class.

Front Material

Alkyd resin.

Release Paper

PE-coated silicone paper, 145g/m².

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® 5300 Commercial Grade was especially developed for the manufacture of guidance and information signs as well as for reflective lettering, numbers and symbols, which are intended for a medium-term outdoor use and which require just a minimum of retroreflection. The ORALITE® 5300 Commercial grade has an adhesive with an excellent adhesion on metallic surfaces as aluminium and zinc coated steel plate. When using the ORALITE® 5300 Commercial 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)

Table 1 – Specific coefficient of retroreflection R' in cd/lx/m ²									
Observation angle	0.2°			0.33°			2°		
Entrance angle	5°	30°	40°	5°	30°	40°	5°	30°	40°
white (010)	70	30	10	50	24	9	5	2.5	1.5
yellow (020)	50	22	7	35	16	6	3	1.5	1
orange (035)	25	10	2,2	20	8	2,2	1,2	0,5	-
red (030)	14,5	6	2	10	4	1,8	1	0,5	0,5
green (060)	9	3,5	1,5	7	3	1,2	0,5	0,3	0,2
blue (050)	4	1,7	0,5	2	1	-	-	-	-

Colours (DIN 5033 Part 3, DIN 5036 Part 1, DIN 61871, state as manufactured)

Table 2 – Colour coordinates									
Colours	1		2		3		4		Luminance factor β
	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	≥ 0.35
yellow (020)	0.494	0.505	0.470	0.480	0.513	0.437	0.545	0.454	≥ 0.27
orange (035)	0.610	0.390	0.535	0.375	0.506	0.404	0.570	0.429	≥ 0.17
red (030)	0.735	0.265	0.700	0.250	0.610	0.340	0.660	0.340	≥ 0.05
green (060)	0.110	0.415	0.170	0.415	0.170	0.500	0.110	0.500	≥ 0.04
blue (050)	0.130	0.090	0.160	0.090	0.160	0.140	0.130	0.140	≥ 0.01

Physical and Chemical Properties

Thickness* (without protective paper and adhesive)	95 micron
Temperature resistance**	Adhered to aluminium, -50° C to +82° C
Saltwater resistance (DIN 50021)	Adhered to aluminium, after 100 h/ 23° C 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, 8 h in wash-alkalics (0.5% household cleaning agents) at room temperature and 65° C, no variation
Adhesive power* (FINAT-TMI after 24h, stainless steel)	15 N/25 mm (film tear)
Shelf life**	2 years
Application Temperature	$\geq +10^{\circ}$ C
Service life by specialist application under vertical outdoor exposure (standard central European climate)	7 years (not printed)

* average ** 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 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 self-adhesive reflective material can only be used for dry application. Furthermore the application information published by ORAFOL is to be considered.

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 Reflexite® and 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 Reflexite® and 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 Reflexite® and 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 for detailed information.

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