

## Description

ORALITE® 5200 Economy Grade are weatherproof, self-adhesive retroreflective films with an excellent solvent resistance. The smooth surface has a high scratch resistance and a good printability.

The retro reflective system of the ORALITE® 5200 Economy Grade consists of catadioptric glass beads which are embedded in a transparent layer of plastic material (Type A, formerly Type I).

## Front Material

Special cast PVC film.

## Release Paper

PE-coated silicone paper.

Product codes and batch numbers are printed on the backside of the liner. With help of these, all production parameters and raw materials can be traced.

## Adhesive

Solvent polyacrylate, permanent.

## Area of Use

ORALITE® 5200 Economy Grade was especially developed for the manufacture of information signs as well as for reflective advertising art, which are intended for a short-term outdoor use and which require just a minimum of retro-reflection. The smooth surface shows a high scratch resistance and impact strength, and a very good printability. Problem-free printing using solvent-based inkjet printing and excellent processing on cutting plotter systems.

ORALITE® 5200 Economy Grade has excellent adhesion on metallic surfaces as aluminium and zinc coated steel plate. Exposure to high doses of UV light, maritime climate, or industrial pollution as well as migration of volatiles from plastic substrates or fouling of the surface might reduce performance or lifetime of the product. When using the ORALITE® 5200 Economy Grade the particular national specifications must be complied with.

## Printing

Ink-jet printing with solvent-based inks, UV or latex inks. We recommend ORALITE® 5018 screen printing ink. Top coating is not required.

## Product Data

**Typical Values for the coefficient of retroreflection** (new sheeting, measured using CIE standard illuminant A, and the provisions of CIE No. 54.2 and according to DIN 67520):

Table 1 – Specific coefficient of retroreflection in cd/(lx m <sup>2</sup> )				
Observation angle	0.2°		0.33°	
Entrance angle	5°	30°	5°	30°
white (010)	50	22	36	15
yellow (020)	32	14	22	9
red (030)	12	5	8	3
orange (035)	16	7.5	12	5
blue (050)	3	1.3	1.9	0.6
green (060)	6	2.5	4.5	1.8

**Colour specification limits at daylight** (new sheeting, measured in accordance with CIE No. 15.2 and DIN 6171):

Table 2 – 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	$\geq 0.35$
<b>yellow (020)</b>	0.494	0.505	0.470	0.480	0.513	0.437	0.545	0.454	$\geq 0.27$
<b>red (030)</b>	0.735	0.265	0.700	0.250	0.610	0.340	0.660	0.340	$\geq 0.05$
<b>orange (035)</b>	0.610	0.390	0.535	0.375	0.506	0.404	0.570	0.429	$\geq 0.17$
<b>blue (050)</b>	0.130	0.090	0.160	0.090	0.160	0.140	0.130	0.140	$\geq 0.01$
<b>green (060)</b>	0.110	0.415	0.170	0.415	0.170	0.500	0.110	0.500	$\geq 0.04$

## Physical and Chemical Properties

<b>Thickness*</b> (without protective paper)	100 micron (4.0 mils)
<b>Temperature resistance**</b>	Adhered to aluminium, -50° C to +82° C
<b>Adhesive power*</b> (FINAT-TM1 after 24h)	adhered to stainless steel: 15 N/25 mm (1 inch)
<b>Shelf life**</b>	2 years
<b>Application Temperature</b>	> +10° C
<b>Service life by specialist application***</b> under vertical outdoor exposure	3 years (unprinted)

\* average      \*\* in original packaging, at 20° C and 50% relative humidity      \*\*\*standard central European climate, no warranty for non-vertical applications

## 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.

ORALITE® is a trademark of ORAFOL Europe GmbH.

