

## Description

ORALITE® FD 1403 is a tough weather and solvent resistant product designed for rugged outdoor maritime use. It is compliant with U.S. Department of Transportation specification USCG 46 CFR, section 164.018 and International Maritime Organisation (IMO) resolution A.658(16). The approval is for Type I and Type II. For application to rigid and non-rigid maritime substrates, i.e. life rafts, life buoys, life vests and life boats and is available in both adhesive and fabric backed versions.

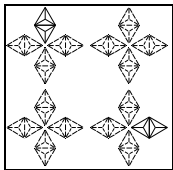
## Product Construction

ORALITE® FD 1403 is composed of cube corner (microprism) retroreflective elements integrally bonded to a flexible, smooth-surfaced tough and weather resistant UV stabilised polymeric film. The prism surfaces are coated with a vacuum deposition of aluminium to provide a mirror surface to the prism facets. The resulting film is not more than 0,02 cm thick, and comes with an aggressive pressure sensitive adhesive or a textile backing.

## Product Approval

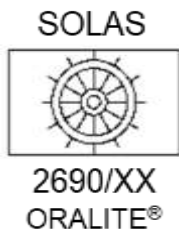
IMO resolution A.658(16).

## Film Logo Pattern



## Wheel Mark

ORALITE® IMO/SOLAS FD1404 carries a permanent ships wheel marking for easy recognition of the approved quality of the material.



NOTE: In place of the XX the last two digits of the year manufactured will provided.

## Colour

ORALITE® FD 1403 is available in silver (retroreflection in white). The colour shall be located in the area defined by the chromaticity coordinates provided in Table 1, when measured in accordance with CIE No. 15 and illuminated with the CIE standard illuminant D<sub>65</sub> using 45° / 0° or 0° / 45° geometry.

## Retroreflectivity

When illuminated with CIE illuminate A and measured with provisions of CIE No. 54 the typical coefficient of retroreflection (RA) of ORALITE® FD 1403 is shown in Table 2.

## Adhesive

ORALITE® FD 1403 can be supplied with a pressure sensitive adhesive. The adhesive is protected by a release liner which shall be removed by peeling, without soaking in water or solvents.

## Application Instructions

Please contact ORAFOL for full instructions.

## Shelf Life

The product must be used within one year from the shipment date. All rolls including partially used rolls should be stored in original packaging, tightly wound. Store in a clean and dry area, away from direct sunlight. Store at 20° C and 50% relative humidity.

**Table 1**  
**Colour Specification Limits (Daytime)**

Colour	Chromaticity Coordinates*							
	1		2		3		4	
	x	y	x	y	x	y	x	y
Silver	0,300	0,270	0,385	0,355	0,345	0,395	0,260	0,310

\*) The four pairs of chromaticity coordinates determine the acceptable chromaticity when measured with standard illuminant D<sub>65</sub> using a Hunter LabScan spectrophotometer.

**Table 2**  
**Retroreflectivity**

Observation Angle	Entrance Angle ( $\beta_1, \beta_2=0$ )		
	5°	30°	45°
0,10°	1000	575	150
0,20°	700	400	100
0,50°	160	75	50
1,00°	20	15	10

All values have units of cd/lux/m<sup>2</sup>.

## IMPORTANT NOTICE

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.

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