# ORALITE® 5431
# Construction Grade



## Description
ORALITE® 5431 Construction Grade films are weatherproof, self-adhesive retroreflective films with an excellent corrosion and solvent resistance. The retroreflective system of the ORALITE® 5431 Construction Grade consists of catadioptric glass beads which are embedded in a transparent layer of plastic material (classification RA1, design A, former Type I). The smooth surface has a high scratch resistance and a good printability. The minimum reflection data corresponds to EN 12899-1. The daylight colours correspond to the international norms for reflective materials of this class.

## Front Material
Special cast PVC film, with aggressive tack.

## Release Paper
PE-coated silicone paper, 145 g/m².
As the product and batch numbers 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® 5431 Construction Grade were especially developed for the manufacture of traffic control and guidance signs which are made of polyolefinic material, e.g. road works signs, which are intended for a short-term outdoor use. The material has an identification watermark. The material is signed with the imprint necessary for road works signs and available both as application kits and rolls.
The material is suitable both for digital printing with solvent based inks and for use on cutting plotters and provide good adaptability including to uneven surfaces. When using the ORALITE® 5431 Construction Grade, the particular national specifications have to be complied with.

## Product Data
Minimum reflection data (DIN 67520, Part 1)

**Table 1 – Specific coefficient of retroreflection R' in cd/lx/m²**

| **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 |
| **red** | **(030)** | 14.5 | 6 | 2 | 10 | 4 | 1.8 | 1 | 0.5 | 0.5 |
| **orange** | **(035)** | 25 | 10 | 2.2 | 20 | 8 | 2.2 | 1.2 | 0.5 | - |

## Physical and Chemical Properties

| | |
|---|---|
| **Thickness*** (without protective paper and adhesive) | 90 micron |
| **Temperature resistance**** | adhered to aluminium, -40° C to +82° C |
| **Adhesive power*** (FINAT-TMI after 24h, stainless steel) | 15 N/25 mm (film tear) |
| **Shelf life**** | 2 years |
| **Application Temperature** | › +10° C |
| **Service life by specialist application** under vertical outdoor exposure (standard central European climate) | 4 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 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.

## 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 for detailed information.