

# Practical Information

## ORALITE® - Reflective Films



ORAFOL® Europe GmbH

### 1 Preliminary remarks

For graphics arts applications, **ORAFOL®** recommends using material from the same batch only. If materials from different batches have to be used, the user must check in advance whether any differences between the batches will affect processing of the films and/or impair the final result.

### 2 Storage

ORALITE® - Reflective Films should at all times be stored in a cool and dry place, protected from sunlight, those which are wound up on rolls suspended, those enclosed in the original cartons horizontally and those supplied in sheets on low shelves or on pallets. Temperatures in the range of 20°C to 24°C and a relative humidity of 40 to 60% are considered ideal. When holding them in storage, they should be sorted according to their batch numbers and their dates of receipt.

### 3 Cutting and punching

ORALITE® - Reflective Films may be cut or punched manually and/or using a plotter (preferably a flat-bed plotter with integrated, pneumatically-controlled cutting head) or cut in stacks (stack height 10 cm) using a stack cutter. Use only very sharp cutting and punching tools.

### 4 Quality of the receiving surface

A high quality of the application of the ORALITE® - Reflective Films largely depends on the quality of the receiving surface and the application temperature. The receiving surface should be clean, dry and free of oil and grease, stripping agents, silicone and any other contamination. Gas bubbles may form between the film and the surface if any solvent residue remains as a result of improper cleaning or if the lacquer on the surface is too fresh. Plates made of aluminium alloys offer the best adhesion, though other weatherproof, smooth and solid, non-porous surfaces are also suitable. However, we recommend our customers to test the reliability of the film application, prior to use.

### 5 Colour match

If several blanks of the ORALITE® - Reflective Films shall be applied to a surface, these have to be checked for their colour match at daylight and under illumination in retroreflection. It is important to use reflective film material from one roll only. If one roll is not enough, always choose material from the same batch.

### 6 Applying the film

Remove the protective paper from the ORALITE® - Reflective Films by placing the blank plane on a base. Several webs of the film should be applied so as to overlap each other. Depending on the format, there should be an overlap of 3 to 6 mm. Make sure that the films are always applied making the right side meet the right side and the left side meet the left side. The air and material temperature should not drop below 15°C while applying the ORALITE® - Reflective Films. Whether by hand or by means of machines, ORALITE® - Reflective Films should preferably be applied at temperatures around 21°C. An application by hand is recommended only for small blanks, using a rubber roller of medium hardness. In order to guarantee an exact positioning of the blank, begin with removing only 60 to 80 mm of the protective paper from the ORALITE® - Reflective Film. Position the blank on

the receiving surface and press on the bare end with the adhesive. Grip the end of the buckled protective paper under the blank and continue pulling it slowly off, simultaneously pressing on the blank with the rubber roller. Cut off the parts of the film that project over the substrate with a sharp knife and press the film on once more. When using a machine for applying the film, make sure that the pressure roller has been adjusted completely even over the entire width, and the substrate is not displaced when starting the application. The roller pressure should be set to approximately 80g/cm². Apply ORALITE® - Reflective Films to a surface in a dry state only.

For the application on cars please see additionally the practical information on how to apply self-adhesive films on cars.

### 7 Applying lettering / symbols

Lettering and symbols can either be screen-printed using two-component or one-component ORALITE® - Screen Printing Inks, or depending on the ORALITE® - Reflective Film being used, can be applied as ORALITE® - Lettering Film. Depending on the substrate ORALITE® - Reflective Film, coloured inserts may also be made using ORALITE® - Transparent Films.

### 8 Glazing printing technique

Silk-screen printing using ORALITE® Screen Printing Inks. The ORALITE® - Reflective Films can be printed before or after being applied to a surface. Printing applied with ORALITE® - Screen Printing Inks does not need to be lacquered.

### 9 Cleaning

First rinse with clear water and then clean with a sponge or a soft brush in warm water to which a commercial detergent is added. Finally rinse the cleaned surface with clear water. Never use hard utensils (coarse brushes or scraper blades) to clean films.

### 10 Removability

Once being applied, permanent adhesive retroreflective films cannot be removed without damaging them. Careful heating helps remove the top layer. Use a solvent-based varnish thinning agent for removing the adhesive.

This information is based on our knowledge and experience. We have not explain all considering aspects of application. Specialized or occupational knowledge and competence of an professional sign maker are presupposed. Due to the diversity of potential influencing factors during application and use, we recommend to make own tests of our products by customers who wish to use the films for special applications. No legally binding warranty of certain qualities can be derived from our information.

Oranienburg, 13 March 2008

ORAFOL® Europe GmbH  
Orafolstraße 2, D-16515 Oranienburg  
Tel.: +49 (0) 3301 864 0, Fax: +49 (0) 3301 864 100  
Email: Verkauf@orafol.de