

# ORACAL® 451

## Banner Cal

### Short description

Highly flexible special PVC film with silk-gloss surface.

### Front material

Partially polymer PVC film, 0.08 mm

### Liner

One-sided siliconized kraft paper, 137 g/m<sup>2</sup>

### Adhesive

Solvent-polyacrylate permanent, Transparent, 0.026 mm

### Recommended transfer materials

ORATAPE® HT95 Application Tape, ORATAPE® LT52 Application Tape, ORATAPE® LT95 Application Tape, ORATAPE® MT52 Application Tape, ORATAPE® MT72 Application Tape, ORATAPE® MT80P Application Tape, ORATAPE® MT95 Application Tape

### Technical properties

#### RESISTANCE

|                                      |                                                                                                                |                                                           |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Durability                           | with vertical outdoor exposure, normal Central European climate<br><br>3 Year(s)                               |                                                           |
| Shelf Life                           | 2 Year(s)                                                                                                      | in original packaging, at 20 °C and 50% relative humidity |
| Resistance to solvents and chemicals | Oils, Greases, Fuels, Weak acids, Salts and alkalis, Isopropyl alcohol, Washing suds (0.5 % household cleaner) | At room temperature                                       |
| Maximum shrinkage                    | Maximum shrinkage along 0.4 mm<br>Maximum shrinkage across 0 mm                                                | bonded to steel   FINAT TM 14<br>FINAT TM 14              |
| Elongation at break                  | Minimum elongation at break along 120 %<br>Minimum elongation at break across 150 %                            | DIN EN ISO 527                                            |

# ORACAL® 451

## Banner Cal

|                               |                                                                                                             |                                                        |
|-------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Tensile strength</b>       | Minimum tensile strength along 15 N/mm <sup>2</sup><br>Minimum tensile strength across 15 N/mm <sup>2</sup> | DIN EN ISO 527                                         |
| <b>Seawater resistance</b>    | no change                                                                                                   | after 100h/35°C   adhered to aluminum, DIN EN ISO 9227 |
| <b>Temperature resistance</b> | Minimum temperature -40 °C<br>Maximum temperature 60 °C                                                     | adhered on aluminium, central European normal climate  |

### ADHESIVE PROPERTIES

|                       |            |                                                            |
|-----------------------|------------|------------------------------------------------------------|
| <b>Adhesive power</b> | 14 N/25 mm | after 24 h, on stainless steel   Average value, FINAT TM 1 |
|-----------------------|------------|------------------------------------------------------------|

### PROCESSING

|                                |                           |
|--------------------------------|---------------------------|
| <b>Application temperature</b> | Minimum temperature 10 °C |
|--------------------------------|---------------------------|

### PRODUCT NOTE

Bonding to truck tarpaulins is generally not recommended. Before bonding, we recommend cleaning the substrate with ORAFOL® Surface Cleaner and ensuring that it is completely dry.

### IMPORTANT NOTES

All ORACAL® products are subject to careful quality control throughout the manufacturing process. It is guaranteed that the products are delivered in merchantable quality and free of manufacturing defects. The traceability of our goods in accordance with ISO 9001 is ensured by means of the roll number. The information published on ORACAL® products is based on research results which the company believes to be reliable, but which do not constitute a guarantee. Because of the wide variety of uses of ORACAL® products and the continuing development of new applications, it is the responsibility of the purchaser to carefully evaluate the suitability and performance of the product for its intended use. Furthermore, the processing instructions issued by ORAFOL must be observed. The purchaser bears all risks arising from the use of these products. All information is subject to change without notice. ORACAL® is a registered trademark of ORAFOL Europe GmbH.