

PRODUCT DESCRIPTION

3D Films **RENOLIT COVAREN** and **RENOLIT ALKOREN** solid and printed

GENERAL DESCRIPTION

RENOLIT COVAREN and **RENOLIT ALKOREN** films are single or multilayered PVC films which are 3-D thermo formable. Investment in technology and manufacturing has led to the production of superb designs and high quality solid colours, using the latest pigmentation, printing and embossing techniques. The products have excellent mechanical resistance, light fastness and stain resistance.

They are supplied as decorative surfacing for lamination to profile milled MDF boards and ensure processing (thermo-form presses) and application for interior equipment without problems. The films are primed on the reverse side.

PROCESSING

- Forms with a silicone membrane (other membranes have to be approved by the pressing company) or without a membrane.
- Adhesive: PUR-dispersion with hardener, the system should be adjusted according to glue supplier recommendations.
- Forming cycle of a 0,35 mm gauge **RENOLIT COVAREN** or **RENOLIT ALKOREN** film (approx. values) without PE protection film:

temp. of heating plate, with membrane	140°C/ 284°F (membrane 110°C/ 230°F)
temp. of heating plate, without membrane	125°C/ 257°F
time of preheating	30 - 80 seconds
Vacuum	4 - 6 seconds
pressing time	30 - 40 seconds
pressure	4 - 5 bar
relaxing	20 seconds

Film with PE protection film may require specific machine conditions (especially during the preheating phase) as the PE protection film is sensitive to temperature and contact to the heating plate.

STORAGE CONDITIONS

- Store in a dry clean environment at room temperature with moderate humidity. The material can be suspended in unopened packaging. Store away from sources of heat and sunlight.
- Material should be acclimatised 72 hours prior to use at room temperature (about 20°C).
- Shelf life: without PE protection film about 12 months, with PE protection film 3 months.

CLEANING RECOMMENDATIONS

- Use non abrasive cleaners or mild cleaning solutions.
- Do not use abrasive cleaners, solvents, polishes, waxes or steam cleaning tools.
- As a precaution to test the suitability of a cleaning product, apply to an inconspicuous area, minimizing the time of exposure and the amount of cleaning agent (diluting as recommended by the supplier) in order to prevent any damage to the surface.

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TECHNICAL STATUS 2014

This technical information sheet represents our latest state of knowledge and shall inform without obligation. The herein stated details do not release the manufacturer of our products from their own inspections and tests, which must correspond with the relevant national guidelines for its individual intended purpose. Especially it is the duty of the customer to control if the purchased product is suitable for its intended purpose.

TECHNICAL DATA

Properties / Test Methods	Values / Tolerances
1. Thickness (*) DIN EN ISO 2286-3, 1998-07	0,30 - 0,50 mm, tolerance +/- 7,5 %
2. Dimensional Stability 10 min. 100°C, circulated air	longitudinal max. - 5 % transverse max. + 2 %
3. Embossing Stability 10 min. 120°C, circulated air	no visible changes to gloss, embossing or colour compared to the standard
4. Light fastness DIN EN ISO 4892-2, 2006-06 DIN EN ISO 105 B 02, 2002-07	≥ 6 (blue scale)
5. Chemical Resistance DIN EN 12720, 1997-10 (test substances and exposure times acc. DIN 68861/1, 2001-04)	Class 1 B (*1)
6. Scratch Resistance DIN 68861/4, 1981-12	Class 4 D (> 1,0 - 1,5 N)
7. Resistance to Dry Heat DIN 68861/7, 2001-04	Class 7 C (100°C)
8. Resistance to Wet Heat DIN 68861/8, 2001-04	Class 8 B (75°C)
9. Abrasion Resistance DIN 68861/2, 1981-12	Class 2 B (> 350 - 650 turns)
10. Tensile Strength DIN EN ISO 527-3/2/200, 2003-07	longitudinal ≥ 40 N/mm ² transverse ≥ 30 N/mm ² (depending on embossing)
11. Gloss Level Tolerances DIN 67530, 60° measuring head, 1982-01	≤ 15 +/- 2 16 to 30 +/- 3 31 to 50 +/- 5 > 50 +/- 7
12. Colour Tolerance for plain films, for production; not valid for metallic DIN 53236 (45/0), 1983-01 DIN 6174, 2007-10 (only light colour)	$\Delta E \leq 0,50$ $\Delta L \text{ +/- } 0,30$ $\Delta a \text{ +/- } 0,20$ $\Delta b \text{ +/- } 0,30$
13. Colour Consistency of printed films and metallic designs: Original specimen comparison	Manufacture and visual assessment with original specimen.
14. Fault definition	Optical deviations are regarded as faults if they are recognisable with the naked eye from a distance of 50 cm, within 30 seconds in good lighting.

(*) the thickness refers to the smooth film surface and it may be up to 10 % more while using deep embosses – then it will be during one whole order and from order to order in the shown tolerance

(*1) for UV-cured lacquers: with the exception of red wine, coffee, mustard and onion