



OWI GmbH

■ Rodenbacher Str. 44-46  
97816 Lohr am Main  
Germany

Tel: ++49 (0) 93 52 5 09-0  
Fax: ++49 (0) 93 52 5 09-100  
info@owi-lohr.de  
[www.owi-lohr.de](http://www.owi-lohr.de)



Formteile aus Holz und Kunststoff

#### The advantages of OWI-Thermoformholz®

- Increased durability
- Improved shape retention and dimensional stability
- Optically attractive accents of colour and gloss
- Greater resistance to weather and fungus
- New design possibilities for moulded items for outdoor use
- Indigenous wood from renewable resources
- More economic than solid wood
- No chemical treatment
- Complete protection throughout the cross-section thanks to layered structure

#### Uses for OWI-Thermoformholz®

- Outer wall coverings
- Balcony coverings
- Balcony view protectors
- Verge screens
- Column Casings
- Sound screens
- Billboards
- Garden furniture
- Baths

Moulded parts for outdoor use ■

Made of indigenous renewable beechwood ■

Resistant to the effects of weather and fungus ■

Not treated chemically ■

**OWI-THERMOFORMHOLZ®** ■

New possibilities for design ■

Attractive accents of colour and gloss ■

## Beech plywood A wonderful material

Parts made of moulded beech plywood are aesthetically pleasing, versatile, and provide the basis for allsorts of ergonomically favourable seating. They are made from an indigenous renewable resource. Their grace and versatility allow them to



be used in many different ways, providing optimum conditions for design. It has not been possible until now to use moulded objects made from beechwood veneers outdoors: their take-up and giving off of moisture means that they “work” and age visibly. This has meant up to now that they have been passed over in favour of solid teak furniture. The availability and ecology of tropical timber is however an increasingly controversial issue.

### Tempered by heat Moulded wood with improved characteristics

We temper the independence of moulded items made of rotary cut beechwood veneers, so that without any surface treatment, they are reliable even outdoors: true to form, elegant, weatherproof. For use in interiors, conventional moulded wooden parts made of beechwood are carefully worked and refined with elegant face veneers to give alterations in colour or to lend gloss.



### The process: Thermal tempering

Without any further surface treatment, thermal finishing also gives the moulded parts exotic accents of colour, making them attractive for use in interior design. Thermo-wood, or thermally modified timber (TMT) to be more precise, has been produced industrially for approximately ten years.

Thanks to thermal modification, the structure of the cell is altered in such a way that the uptake of moisture and equilibrium moisture content are crucially reduced. Swelling and shrinking are reduced by approx. 50 %. Bacteria and

wood-destroying fungus lose their source of nutrients, as the hemi-cellulose – short-chained sugars – is broken down. OWI has applied this knowledge to beechwood veneers and tempers them using a special thermal process. For objects to be used outdoors, an adhesive containing melamine resins is also used. Melamine resins increase the durability of the surface.

Its optically attractive variation in colour makes thermo-wood an alternative to tropical timbers for use in interior design, too.



## Wood is Brilliant Even as a Facade

The first impression is what counts, and your house facade is like your business card. More and more architects and builders are discovering wood as an appealing natural building material for their constructions' outer surface.

### XENON-test



control sample



XENON 500 h



XENON 1000 h



XENON 1500 h

### Resistance/Durability XENON-test

Untreated beechwood is classed under Durability Class 5 (not durable) according to DIN EN 350-2.

Thanks to our thermal processing of rotary cut veneer, we have been able to achieve Durability Class 1 (very durable). External weathering and xenon tests have shown that the bonding is absolutely firm even after 1500 test hours, which corresponds to 12 years' use. The surface becomes silvery grey, as is the case with teak.



The reasons for this are clear: short construction periods, high durability, good insulation properties, and a great deal of architectural freedom characterize this material.

Whether applied to new builds or renovations, when combined with insulation, wood facades keep the masonry free of frost, reduce heating costs, and increase the temperature of the inner walls. Wood facades make the house much more beautiful as well. In order to enjoy a long-lasting outer facade, one must take the appropriate measures to protect the wood. A chemical wood coating is not necessary, but an adequate roof overhang and at least a 30 mm gap between the wood and the ground to reduce the effects of splashing water are. To ensure proper ventilation, it is also necessary to maintain 3 cm of airspace behind the facade.



## Wood is Alive Make a better impression with OWI-Thermoformholz®

Those who choose a wood facade want a natural building material, but untreated wood that is able to withstand sun and rain will eventually change in color and composition. Builders must therefore always decide whether they want to keep the natural finish or apply a color coating. Pigmented and UV-resistant protective coatings can provide for a constant and uniform appearance. Wood facades adjust to their natural surroundings. Untreated wood may gray in color over time, but will retain its strength.

If left uncoated, it is possible that OWI-Thermoformholz® will begin to gray and show water streaks after hard rain, snow, and hail. To preserve an even surface, we recommend a suitable nonfilm-forming surface treatment. These include: oil, wax and varnishes.



