

OWI



Moulded parts for outdoor and interior use ■

Flameproof (German fire rating DIN 4102/B1), or ... ■

...resistant to the effects of the weather and fungus ■

Made of beechwood, an indigenous renewable resource ■

FIRE OR WATER ■

New possibilities for design ■

Attractive accents of colour and gloss ■



OWI-Thermoformholz® – passes all tests!

Fire test B1 flameproof according to DIN 4102, Part 1...

Different requirements call for different processes

Moulded parts for external use and moulded parts for interior use have completely different requirements.

For outdoor use, moulded wood which is resistant to the weather (water, fungus, etc.) is required, whereas for interior use, safety aspects such as inflammability come to the fore.

Two sorts of OWI-Thermoformholz® are available: weather-resistant or flameproof. Both sorts offer the same design possibilities, innovative in their optical appeal, and are made of the indigenous renewable resource, beechwood.



Picture left: Fire test in the laboratory

FIRE

OWI-Thermoformholz® for interior use

Certification: B1
– flameproof –

Its thermal finishing means that OWI-Thermoformholz® is already free of readily inflammable constituents. In combination with the application of non-toxic flame retardants, this guarantees a high degree of safety in the event of a fire.

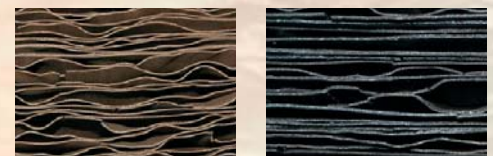
Unlike OWI-Thermoformholz® for outdoor use, the flameproof version is coated with a protective lacquer. The fact that it passes the B1 test opens up all sorts of new uses and applications for OWI moulded parts made of OWI-Thermoformholz® (B1 flameproof).

Examples: public buildings and public transport, waiting areas...

...OR...



Different coloured veneers allow for all sorts of designs of OWI-Thermoformholz®



...and the XENON test



Control sample

XENON 500 h



XENON 1000 h

XENON 1500 h

In the xenon test, OWI-Thermoformholz® achieves Durability Class 1 (very durable), comparable to teak and intsia.



WATER

OWI-Thermoformholz® for outdoor use

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: elegant, true to form, weather-proof.

Without the need for any further surface treatment, thermal finishing also gives the moulded wood exotic accents of colour, making it an attractive alternative for use in interior design, too.

The process

Thermal tempering

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 outdoor applications, an adhesive containing melamine resins is also used. Melamine resins increase the durability of the surface and are well-known for their use e.g. in kitchen worktops.

Thermo-wood

The alternative to tropical timber

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

Nowadays thermo-wood applications in solid wood are often to be found in façade cladding, in garden and landscape design (e.g. patios), and in wellness areas. For garden and outdoor furniture, its use has however been limited up to now.

With OWI-Thermoformholz®, the full range of design options and appealing accents of colour are available for outdoor applications, too.





Moulded parts made of wood and plastic

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FIRE OR WATER

General advantages of OWI-Thermoformholz®

- Increased durability
- Improved shape retention and dimensional stability
- Attractive accents of colour and gloss
- Indigenous wood from renewable resources
- More economic than solid wood
- Complete protection throughout the cross-section thanks to layered structure

Special advantages of OWI-Thermoformholz® for interior use

**Certification: B1
– flameproof –**

- Maximum safety in interior use (B1 flameproof according to DIN 4102, Part 1)
- Flame retardant presents no risk to health

Uses:

- All areas in which fire safety regulations apply e.g. for large-scale events, concerts, conferences, airports, ships, etc.

Special advantages of OWI-Thermoformholz® for outdoor use

Moulded wood with superlative characteristics

- Greater resistance to weather and fungus
- New design possibilities for moulded items for outdoor use

Uses:

- Garden furniture
 - Furniture in wellness and wet areas
 - Play equipment
 - Furniture "for inside and out"
 - Stadium seating
- Promoted by the Bavarian Technology Promoting Programme (BayTP)