

## Using Admonter Elements (natural wood panels) in saunas

Admonter Elements are produced according to EN 13353. The corresponding CE Declaration of conformity according to EN 13986 is available at <http://www.admonter.at/downloads>.

Admonter Elements are widely used in sauna areas and are basically also suitable for use inside the sauna. However, the following factors need to be taken into account in the planning and operation of the sauna:

- Only natural wood panels/ELEMENTs with a raw surface in SWP/2 gluing standard and in hardwood with a plywood middle layer from our range are suitable for use in saunas.
- Wood is a hygroscopic material that reacts to changes in humidity. A dry climate dries out the wood and in a moist climate the wood acts as a strong moisture absorbent.

The following example illustrates this:

Operating status	Temperature	Relative humidity	Equilibrium moisture content of the panel
Sauna not in operation	23 °C	75 %	~ 15 %
Sauna heated, without moisture supply	90 °C	5 %	< 1 %
Sauna in operation and occupied	85 °C	15 %	~ 3 %
After infusion	85 °C	40 %	> 5 %

Table contains approximate values; actual values can vary considerably depending on the operating conditions.

- Saunas therefore place quite extreme demands on wood, but especially on natural wood panels, due to the extremely humid or dry climatic conditions and the rapid change between these conditions. This means that crack formation, resin leakage and efflorescence as well as wood staining have to be expected. To minimise damage, regulate the air exchange with appropriate relative humidity and avoid long-lasting extreme climates.
- Intensive use of the sauna can cause an overload detrimental to the wood. Admonter Holzindustrie AG only offers a limited warranty on saunas, i.e. overstressing of the glue joints with clearly detectable fibre splitting and tearing is excluded from the warranty. The builders and/or operators of saunas must take suitable measures to prevent an overburdening of the materials used in their construction.
- The multi-layer structure of Admonter Elements makes them dimensionally very stable compared to solid wood. However, the natural reaction of wood to changes in humidity can never be completely prevented. Special attention must be given to the design and composition of the substructure to counteract or deal with this factor.
- All Admonter elements meet the requirements of formaldehyde emission standard E1, as determined per EN 717.

In addition, with regard to their formaldehyde emission as per ÖNORM M 6219-1:2010, the Admonter Elements "Spruce", "Spruce Reclaimed Wood", "Stone Pine" as well as "Sunbaked Reclaimed Wood" are also approved as for their "Sauna Special Gluing".

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