

## Please read carefully before starting installation

**Rule of thumb:** The installation should occur in a conditioned space comparable to what would be expected once the building is occupied.

### Storage at building site

TOPAKUSTIK materials have to be protected against humidity and have to be kept absolutely dry.

- Store materials flat on dry wood or pallets.
- Protect materials from humidity on all sides with plastic sheets.
- Be aware of dampness coming from an untreated concrete floor.

### Acclimation

TOPAKUSTIK materials are to be acclimated inside the installation room 3 to 4 days before installation. All materials should be exposed evenly to the room air.

### Veneered materials made of natural wood

Veneered elements are made of natural wood which are subject to fluctuations in color and structure. Even veneers inside a single crate can show differences. For this reason, we strongly recommend sorting veneered material according to color and grain pattern before installation.

### Stiffeners

TOPAKUSTIK ceiling panels must be stiffened on the back in order to ensure rigidity of the materials over time. This is necessary for the following reasons:

- The slight bowing caused by the panel's own weight can seem acceptable at installation.
- This bending will increase over time to an unacceptable level caused by fatigue of the material.
- Different climatic conditions in the installation room can cause uneven expansion and contraction of the material leading to warping of the panel if not stiffened sufficiently.

### Cleaning

- Clean surfaces with a damp cloth and mild cleaning detergent.
- Use an eraser for pencil marks.
- For surfaces soiled with dust, clean the grooves and holes with vacuum and/or soft brush tool.

### Liability

- Wood is a natural product with unique characteristics that must be taken into account when examining materials for possible warranty claims. Any issues arising due to the inherent nature of wood products are not valid warranty claims.
- Any damage which has occurred during the modification of the material on site or caused by other trades on site are not claims that will be recognized by TOPAKUSTIK.
- Any defects or damage that is caused by improper installation and/or by not following factory recommendations for installation will not be recognized as valid claims against the warranty.

### Claims

Any and all claims against TOPAKUSTIK materials are to be announced immediately after delivery and BEFORE the start of the installation. All claims must be received in writing.

# TOPAKUSTIK

## Expansion and Contraction

TOPAKUSTIK materials are made from MDF (medium density fibreboard). These materials are processed with a moisture content of 8-10% on average and this is dependent on time of year and environmental conditions.

According to Standard DIN 68750/66754 resp. SIA 164/1 wood material shall be installed as follows:

Air moisture	min 35%	-	max 60%
Room temperature	min 64°F	-	max 86°F
Absolute air moisture	5.5 g/m <sup>3</sup>	-	18 g/m <sup>3</sup>
Corresponding wood moisture	7%	-	10.5%

## Conditioned Room

Considering these standards, one has to expect a material – **dilatation of 1.5 mm in 1000mm.** (10.5% - 7% = 3.5% x 0.04% Swelling measure per 1% change)

Therefore, TOPAKUSTIK materials must be separated with gaps of 3-6 mm corresponding to the material size. Separating the single materials by less than 3-6 mm can lead to:

- At increased room moisture = closing of gaps so that the materials can buckle or bow
- At decreased room moisture = the gaps become wider

TOPAKUSTIK planks are fully connected in width when installed (no gap). Installation at high humidity can lead to a slight opening of the plank joints under future dry conditions within that same space. For swimming pools and other high humidity environments, the planks can be equipped with a special dilatation profile in the factory. If installation occurs under conditions that are drier than typical steady state moisture content (winter), this can lead to a slight warping (concave or convex) of the planks under future higher humidity air moisture levels. If it is known that the humidity content is lower than the steady state condition is expected to be, install planks in the space with an additional 0.5 mm of separation in width to account for this.

## Production Tolerances

**Planks:** The TOPAKUSTIK plank is delivered with a standard clean 90° cut.  
The length tolerance is +/- 2mm on the total length. If requested, the planks can be trimmed to a fixed measurement (Tolerance +/- 0.25mm per m<sup>1</sup>, only recommended for plank length up to approx. 2 m > material dilatations)

**Panels:** TOPAKUSTIK panels are produced accurately on computer controlled machines in the factory (Tolerance +/- 0.25 mm per m<sup>1</sup>)

The TOPAKUSTIK materials leave the factory with the above listed (small) measure tolerances. Depending on the type, the exposed surface area of MDF is increased two to three times by grooving and perforation of the TOPAKUSTIK materials. It must be observed and understood that TOPAKUSTIK materials react to changing room humidity at the installation site in greater degree than standard wood panels – they will have more expansion and contraction and will require longer acclimation periods.