General Characteristics of engineered flooring

Lake Collection

General features:
This document specifies engineered wooden flooring manufactured from natural materials, suitable for indoor use as floorcovering under the required (normal dry) climatic conditions.

Wooden flooring in this document is considered as ‘a laminated construction with a top layer of solid wood on a basis of additional layer(s) of wood, or wood-based materials, glued together’.

The cross laminated construction minimizes the possibility of the wood to move (shrink or swell) under changing climatic conditions. Suitable for use in normal interior (RH) humidity Levels. (note: ‘normal’ (RH) humidity Levels are defined as between 45% and 65% relative humidity).

The flooring is suitable for installation by means of the following methods:
• Floating
• Glued down
• Stapled down

General grading:
Specific rules for Classification and Grading are given in below tables
In general, all used timber for engineered wood flooring must be sound and free from mould, decay or rot. There will be variations from panel to panel, but the total impression of the installed floor shall show a homogeneous character of each classification.

Please note that no two floors (or even panels) are the same!
The floors pictured or sampled are an example of the look that may be expected from each classification or grade, and in no way are intended to provide an exact look of the installed floor.

Finishing of wood surfaces
This range of flooring has been finished with an oxidative (air-dried) oil.

Glue bonding:
Glues used are all Class 1: dry interior EN 314-2.

Formaldehyde emission:
Emission class: E1 in accordance with EN 717-1/2
Packaging and Marking

Packs shall have labels on the head of the pack, mentioning:
- Article number
- Treatment and finishing steps of the relevant design
- Size of the article
- Barcode
- Content per pack (in pcs and m²)

Pallets shall have at least 2 bulk-labels, mentioning
- Purchase order number
- Article number
- Product description
- Amount of packs on the pallet

Each pack can have a maximum of 30% in split lengths with a minimum of 60 cm long.

Under floor heating and cooling.
Installing an engineered floor in combination with under floor heating and cooling can be easily achieved and will ensure your home is as comfortable as possible. When installing a wooden floor in combination with under floor heating and cooling you must, however, follow a number of specific guidelines. Please contact us for details.

Humidity
Wood is a natural product and reacts to the conditions of the room in which it is installed. Shrinkage or cracking can occur when the humidity is too low. The best condition for a wooden floor is a relative air humidity of between 45% and 65%. Shrinkage may occur when the relative air humidity is lower making the use of a humidifier a requirement. Despite these measures, there is a small chance that gaps, cracks or checks may occur when under floor heating is used (especially in the winter), or when the relative air humidity is low.

CE marking
All produced engineered flooring complies with the requirements of EN14342:2005+A1:2008.
### Wood species: Oak / *Quercus* spp

<table>
<thead>
<tr>
<th>Nature grade</th>
<th>Rustic grade</th>
<th>Extra Rustic grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mill Run</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Description face appearance
- Wood with some very small knots and slight variations in colour and texture.  
- Wood with knots, natural colour and texture variation.  
- Wood with knots. Exciting variations in colour and texture (in harmony).

#### Sound sapwood, included sapwood
- Permitted up to 15% of the surface if well stained and colour match with the surrounding wood.  
- Permitted up to 40% of the surface if well stained and colour match with the surrounding wood.  
- Permitted up to 40% of the surface if well stained and colour match with the surrounding wood.

*Sapwood shall always be stained colour matched with the surrounding area.*

#### Knots
- **a. Sound knots**  
  - Permitted if diameter \( \leq 15\text{mm} \) if not grouped together.  
  - Permitted if diameter \( \leq 80\text{mm} \) if not grouped together.  
  - No limitations
- **b. Unsound knots**  
  - Permitted if diameter \( \leq 15\text{mm} \) if not grouped together.  
  - Permitted if diameter \( \leq 40\text{mm} \) if not grouped together.  
  - No limitations
- **c. Knot holes**  
  - Not permitted.  
  - Permitted if diameter \( \leq 30\text{mm} \).  
  - Permitted if diameter \( \leq 30\text{mm} \).  

Splits or stars in knots and knot holes shall be properly filled!

#### Checks or split
- Not permitted.  
- Permitted if properly filled and colour match with the surrounding wood surface.  
- Permitted if properly filled and colour match with the surrounding wood surface.  

**End splits permitted.**

#### Biological attack
- Not permitted.  
- Not permitted.  
- Not permitted. Pinholes permitted if they are occasional, scattered and well puttied without discoloration.

#### Black / brown streaks
- Not permitted.  
- Permitted if the length is not longer than the panel’s width.  
- Permitted, no limit.

#### Brown heart
- Not permitted.  
- Permitted, no limit.  
- Permitted, no limit.

#### Medullary ray
- Permitted, no limit.  
- Permitted, no limit.  
- Permitted, no limit.

#### Slope of grain
- Permitted, no limit.  
- Permitted, no limit.  
- Permitted, no limit.

#### Bark pockets
- Not permitted.  
- Not permitted.  
- Permitted, must be firm.

#### Telegraphing (core)
- Not permitted.  
- Not permitted.  
- Not permitted.

#### Other defects which are not indicated
- Not permitted unless they resemble a defect already defined in which case they shall be considered under that defect.

*To allow for unavoidable classification differences, 3% of the panels in a batch may be from other classes at maximum!*

**Very Important:**

Wood is a natural product. Therefore you may see variations in colour and structure from board to board.
PACKAGING

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pieces per pack:</td>
<td>8 layers</td>
</tr>
<tr>
<td>M2 per pack:</td>
<td>2,812 m2</td>
</tr>
<tr>
<td>Weight per pack:</td>
<td>19,72 kg</td>
</tr>
<tr>
<td>Split lengths per pack</td>
<td>35% min 60cm long</td>
</tr>
</tbody>
</table>

SIZE TOLERANCES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Length:</td>
<td>± 0,2%</td>
</tr>
<tr>
<td>Width:</td>
<td>± 0,2mm</td>
</tr>
<tr>
<td>Thickness:</td>
<td>Top layer: 3,0mm nominal before final sanding&lt;br&gt;Total thickness: 14mm ± 0,2mm</td>
</tr>
<tr>
<td>Lipping (between elements):</td>
<td>≤0,2mm</td>
</tr>
<tr>
<td>Squareness:</td>
<td>≤0,2% over the width</td>
</tr>
<tr>
<td>Cup (across the element):</td>
<td>≤0,2% over the width</td>
</tr>
<tr>
<td>Spring (along the element):</td>
<td>≤0,1% over the length</td>
</tr>
<tr>
<td>Bowing</td>
<td>&lt;1% of the length</td>
</tr>
</tbody>
</table>

OTHER SPECIFICATIONS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Formaldehyde emission</td>
<td>E1</td>
</tr>
<tr>
<td>Thermal insulation value</td>
<td>R=0,109m2 k/w</td>
</tr>
<tr>
<td>Brinell hardness</td>
<td>Average HB 3,7</td>
</tr>
<tr>
<td>Connection</td>
<td>Tongue and groove</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>EAN number</th>
<th>Description</th>
<th>LxW</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1193926</td>
<td>8718848086149</td>
<td>Smart Lake Oak RG+ Como 2V CE 8pp</td>
<td>14/3, 1900 x 190mm</td>
<td>Lacquer</td>
</tr>
<tr>
<td>1193928</td>
<td>8718848086163</td>
<td>Smart Lake Oak RG+ Garda 2V CE 8pp</td>
<td>14/3, 1900 x 190mm</td>
<td>Lacquer</td>
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<tr>
<td>1193930</td>
<td>8718848086187</td>
<td>Smart Lake Oak RG+ Iseo 2V CE 8pp</td>
<td>14/3, 1900 x 190mm</td>
<td>Lacquer</td>
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<tr>
<td>1193931</td>
<td>8718848086194</td>
<td>Smart Lake Oak RG+ Lugano 2V CE 8pp</td>
<td>14/3, 1900 x 190mm</td>
<td>Lacquer</td>
</tr>
</tbody>
</table>

Treatments

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1193926 Como</td>
<td>Smoked, brushed reactive stain, invisible water-based lacquer</td>
</tr>
<tr>
<td>1193928 Garda</td>
<td>Open-filled cracks, hand scraped, brushed, smoked, reactive stain, water-based lacquer</td>
</tr>
<tr>
<td>1193930 Iseo</td>
<td>Smoked, brushed, water-based lacquer</td>
</tr>
<tr>
<td>1193931 Lugano</td>
<td>Brushed, reactive stain, water-based lacquer</td>
</tr>
</tbody>
</table>