MDF (Medium Density Fiberboard)

Versatile materials suitable used as base materials for all types of decorative panels.

About MDF

The DAIKEN Group offers two types of MDF (Medium Density Fiberboard), Hardwood and Softwood types.

Hardwood Type  
Product Thickness: 2.5 to 21.0 mm

Excellent Dimensional Stability
Little dimensional change and a low possibility of warping even under harsh environments (at high temperature and high humidity) allow wide use in cabinets, wooden fittings, etc.

Superb Water Resistance
Little swelling in water or in humid environments allows use in window frames (sash frames), flooring baseboards, etc. that require resistance to water and moisture.

Effective Utilization of Untapped Resources and Stable Raw Material Procurement
Taking advantage of our location in Malaysia, we utilize untapped resources such as residual wood pieces discharged from sawmills and plywood plants and also utilize plantation trees to stably procure raw materials.

Softwood Type  
Product Thickness: 1.8 to 30.0 mm

Light-colored Surface suitable for a variety of surface decoration
Laminating this MDF with a translucent sheet has little effect on the decoration surface. In direct printing masking coat process may be removed.

Smooth Surface
Long wood fibers provide smooth surface suitable for lamination, coating, and other treatments.

Effective Utilization of Untapped Resources and Stable Raw Material Procurement
One of our plants is located in New Zealand where planned-afforested radiata pine trees are abundantly available. Portions of the trees not suitable for sawing are used as the raw material of the MDF for stable raw material procurement.

Application Examples

- **Construction Fittings**
  - Flooring material (Base material)
  - Surface material for counter tables, housing equipment, and flush doors
  - Frame material
  - Ceiling cornice, baseboard, and parting edge
  - Counter top and ceiling board for bay windows

- **Kitchen and Bathroom Equipment**
  - Door, side/back plate, and shelf board of kitchen equipment
  - Top board, side/back plate, and shelf board of washstand

- **Office Equipment**
  - Blackboard and partition

- **Furniture and Woodwork**
  - Door, side/top plate, or material of chest/shelf furniture
  - Front plate and panel of drawers
  - Door and panel decoration
  - Table top of legged furniture
  - Dressing table, Buddhist altar fittings, and corner furniture
  - Bed head/foot board
  - Interior accessory (doll case, picture frame, or box)

- **Entertainment Equipment**
  - Front/side plate, shelf board, panel of electronic musical instrument

- **Electric and Acoustic Equipment**
  - Loudspeaker box and rack
  - Table top, legs, and modesty panel of furniture-style Kotatsu (Japanese foot warmer table)
The DAIKEN Group has three MDF production plants in the world, two are located in Malaysia (one line each) and one is in New Zealand (two lines).
### MDF (Medium Density Fiberboard)

#### Product Lineup - Standard Products (JIS Product)

<table>
<thead>
<tr>
<th>JIS Class</th>
<th>Main raw material</th>
<th>Hardwood</th>
<th>Softwood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 30</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type 25</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type 15</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Type 5</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Type M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 30</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type 25</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Type 15</td>
<td>○</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Quality Standards of Standard Products (JIS Product)

<table>
<thead>
<tr>
<th>JIS class</th>
<th>Density (g/cm³)</th>
<th>Moisture content (%)</th>
<th>Bending strength (N/mm²)</th>
<th>Bending strength under internal condition (N/mm²)</th>
<th>Internal bond (N)</th>
<th>Wood screw holding power</th>
<th>Formaldehyde emission (mg/L)</th>
<th>(informative) Bending force (N/mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type U</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 30</td>
<td>30.0 or over</td>
<td>–</td>
<td>0.5 or over</td>
<td>500 or over</td>
<td></td>
<td>2500 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 25</td>
<td>25.0 or over</td>
<td>–</td>
<td>0.4 or over</td>
<td>400 or over</td>
<td></td>
<td>2000 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 15</td>
<td>15.0 or over</td>
<td>–</td>
<td>0.3 or over</td>
<td>300 or over</td>
<td></td>
<td>1300 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 5</td>
<td>5.0 or over</td>
<td>–</td>
<td>0.2 or over</td>
<td>200 or over</td>
<td></td>
<td>800 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 30</td>
<td>30.0 or over</td>
<td>15.0 or over</td>
<td>0.5 or over</td>
<td>500 or over</td>
<td></td>
<td>2500 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 25</td>
<td>25.0 or over</td>
<td>12.5 or over</td>
<td>0.4 or over</td>
<td>400 or over</td>
<td></td>
<td>2000 or over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type 15</td>
<td>15.0 or over</td>
<td>7.5 or over</td>
<td>0.3 or over</td>
<td>300 or over</td>
<td></td>
<td>1300 or over</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wood screw holding power: Applicable to thickness of 15 mm or over

#### Product Lineup - Standard Products (Non-JIS Product)

<table>
<thead>
<tr>
<th>Main raw material</th>
<th>Hardwood</th>
<th>Softwood</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARB</td>
<td>P2</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>ULEF</td>
<td>–</td>
</tr>
<tr>
<td>EN</td>
<td>E1</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>E2</td>
<td>○</td>
</tr>
</tbody>
</table>

* The performance values and the certification labels are based on the Japanese test method and standards.
* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
**Product Lineup (Custom Order)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Main raw material</th>
<th>Product group</th>
<th>Formaldehyde emission level</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hardwood</td>
<td>Softwood</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Floor use     | ○       | ○       | Thickness: 2.7 to 12 mm | JIS A 5905:F☆☆☆☆☆/F☆☆☆☆☆ | • High water resistance  
• Industry-leading dimensional stability  
• Resistance to floor waves and cleaners |
| Acacia 100%   | ○       | –       | Thickness: 2.5 to 6.0 mm  | EN: E1/E2  
JIS A 5905:F☆☆☆☆☆/F☆☆☆☆☆ | • Sustainable Acacia mangium (Plantation tree) fiber used 100% as raw material  
• High bending strength  
• First-class water resistance in MDF category  
• Difficult to be deformed even at high temperature and high humidity |
| Ultra-light board | –     | ○       | Thickness: 7 mm or over  
Density (g/cm³): 0.3 to 0.6 | CARB: P2/ULEF  
EN: E1/E2  
JIS A 5905:F☆☆☆☆☆/F☆☆☆☆☆ | • Lightweight for easy handling and reduced distribution cost  
• Thermal insulation and sound absorption |
| Ultra-thin board | –     | ○       | Thickness: 1.8 mm  | CARB: P2/ULEF  
EN: E1/E2  
JIS A 5905:F☆☆☆☆☆/F☆☆☆☆☆ | • Unprecedentedly thin MDF  
• Suitable as surface material due to inherent surface texture of MDF |

**Plantation Activities**

Sustainable resource development: Aiming to shift from natural to sustainable planted trees, we started planting Acacia mangium trees in Sarawak state of Malaysia in 2002.

**Environmental Protection**

The tree plantation area has reached 4,200 hectares or more, which contributes to a fixed annual carbon dioxide absorption of approximately 200,000 tons.

![Graph: Changes in Afforested Area (Cumulative Total)]

- The performance values and the certification labels are based on the Japanese test method and standards.  
- DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
**DAIKEN Ceiling are chosen in buildings all over the world**

DAIKEN Ceilings are made from selected mineral rockwool fibers and special binders. The mineral rockwool fibers uniformly interwoven by the unique wet-felting process to form DAIKEN Ceilings. Because the DAIKEN Ceilings has porous properties with a low specific gravity, they exhibit efficient thermal insulation and sound absorption qualities, while resisting sound transmission more effectively than glass fiber products.

DAIKEN makes ceiling from slag wool, a byproduct of iron manufacturing.

DAIKEN Ceiling is shown above. The ceiling is made of mineral fibers that are converted from slag and mineral fibers. There is a piece of slag and mineral fibers in the photo below.

---

**Advantages to Users**

**Fire Resistance**
Outstanding fire resistance helps contain fires.

**Sound Absorption**
Adequately absorb the sound and create comfortable reverberant sound.

**Thermal Insulation**
Thermal insulation performance is 6 times better than gypsum board, and helps to minimize cost of air conditioning.

---

**Advantages to Builders**

**Easy installation and maintenance.**
Most of DAIKEN Ceiling can be installed by the metal suspension system.

**No Asbestos contained**
All DAIKEN Ceilings are Asbestos-free products.

---

**Eco Labels (EXCELTONE MR only)**

- **Environmental Choice Australia**
  DAIKEN EXCELTONE (MR series) Acoustic Ceiling Tile submitted for verification meet the SECA environmental performance criteria and that the products can successfully gain official registration as certified “Good Environmental Choice” products under the Australian Ecolabel Program.

- **Ecopspecifier**
  DAIKEN EXCELTONE (MR series) has been assessed and met the criteria for inclusion on ecopspecifier.org. In addition, a Green Rate Review Building Scheme Pre-Approval has been conducted and found this product is likely to contribute to the achievement of Green Building rating tool credits.

- **ISO International Organization for Standardization**
  [ISO 14001] related to Environmental Management Systems
  [ISO 9001] related to Quality Management Systems
  [Registered Scope] http://www.jscc.or.jp/

---

* The performance values and the certification labels are based on the Japanese test method and standards.
* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
EXCELTON (MR series)

Ceiling Board with outstanding humidity resistance (RH)

EXCELTON (MR series)

EXCELTON (MR series) HIGH NRC Board

PHYSICAL DATA SUMMARY
Representative data of EXCELTON MR series 5/8” MN.

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moisture content</td>
<td>2%</td>
</tr>
<tr>
<td>Modulus of Rupture</td>
<td>1 kgt/cm²</td>
</tr>
<tr>
<td>Fire Propagation Test</td>
<td>Class 0</td>
</tr>
<tr>
<td>Flame Spread</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Class 1</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.045 kcal/m²°C</td>
</tr>
<tr>
<td>Light Reflectance</td>
<td>Over 0.80</td>
</tr>
<tr>
<td>Sound Absorption Coefficient (NRC)</td>
<td>0.55</td>
</tr>
<tr>
<td>Ceiling Attenuation Class (CAC)</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

JIS: Japanese Industrial Standard

Data of EXCELTON MR series 3/4”High NRC MC

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Spread</td>
<td>Class A</td>
</tr>
<tr>
<td>Light Reflectance</td>
<td>Over 0.80</td>
</tr>
<tr>
<td>Sound Absorption Coefficient (NRC)</td>
<td>0.75</td>
</tr>
<tr>
<td>Ceiling Attenuation Class (CAC)</td>
<td>33</td>
</tr>
</tbody>
</table>

EXCELTON Antibacterial and deodorant treatment
Anti-bacterium examination result

<table>
<thead>
<tr>
<th>Bacteria</th>
<th>Specimen</th>
<th>Visible bacteria count (cfu/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coil</td>
<td>regular tile (non-Hospitone coating)</td>
<td>1.1×10⁶</td>
</tr>
<tr>
<td></td>
<td>Hospitone coating</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td>bacteria specimen</td>
<td>2.6×10⁶</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>regular tile (non-Hospitone coating)</td>
<td>7.8×10⁵</td>
</tr>
<tr>
<td></td>
<td>Hospitone coating</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>bacteria specimen</td>
<td>2.2×10⁵</td>
</tr>
<tr>
<td>MRSA methicillin resistant</td>
<td>regular tile (non-Hospitone coating)</td>
<td>1.2×10⁶</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>Hospitone coating</td>
<td>&lt;10</td>
</tr>
<tr>
<td></td>
<td>bacteria specimen</td>
<td>1.2×10⁵</td>
</tr>
</tbody>
</table>

Test Method: drop each bacteria on specimen and stock - culture 24 hours at 36°C and measure the bacteria count. Tested by Japan Food Research Laboratories.

* The performance values and the certification labels are based on the Japanese test method and standards.
* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
## EXCELTONE (MR series)

<table>
<thead>
<tr>
<th>EXCELTONE MR series</th>
<th>Thickness (nominal)</th>
<th>Standard Size</th>
<th>Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposed Board</td>
<td>1/2&quot;, 5/8&quot;</td>
<td>24&quot; x 24&quot; (o.c.)</td>
<td>4 sides: Trimmed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24&quot; x 48&quot; (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 600mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 1,200mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td>Semi-concealed Tile</td>
<td>15mm</td>
<td>400 x 1,500mm</td>
<td>Long sides: Kerf and rabbet, Square edges.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 x 1,500mm</td>
<td>Short sides: Trimmed.</td>
</tr>
<tr>
<td>Shiplap Tile</td>
<td>15mm</td>
<td>400 x 1,500mm</td>
<td>Long sides: Shiplap, bevel edges.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 x 1,500mm</td>
<td>Short sides: Trimmed.</td>
</tr>
<tr>
<td>Reveal Tile</td>
<td>5/8&quot;</td>
<td>24&quot; x 24&quot; (o.c.)</td>
<td>4 sides: Revealed, Square edges.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24&quot; x 48&quot; (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 600mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 1,200mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td>Slim-line Tile</td>
<td>5/8&quot;</td>
<td>24&quot; x 24&quot; (o.c.)</td>
<td>4 sides: Slim-line revealed, square edges.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24&quot; x 48&quot; (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 600mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>600 x 1,200mm (o.c.)</td>
<td></td>
</tr>
</tbody>
</table>

* MC, MA, MP and MV pattern has no square edge Semi-Concealed Tile.

* The performance values and the certification labels are based on the Japanese test method and standards.
* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
### EXCELTONE MR series

<table>
<thead>
<tr>
<th>Thickness (nominal)</th>
<th>Standard Size</th>
<th>Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8”</td>
<td>24” x 24” (o.c.)</td>
<td>4 sides: Revealed, square edges.</td>
</tr>
<tr>
<td></td>
<td>24” x 48” (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>600 x 600mm (o.c.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>600 x 1,200mm (o.c.)</td>
<td></td>
</tr>
</tbody>
</table>

#### Slim-line Tile

<table>
<thead>
<tr>
<th>Thickness (nominal)</th>
<th>Standard Size</th>
<th>Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>15mm</td>
<td>24” x 24” (o.c.)</td>
<td>4 sides: Slim-line revealed, square edges.</td>
</tr>
<tr>
<td></td>
<td>600 x 600mm (o.c.)</td>
<td></td>
</tr>
</tbody>
</table>
Improving the functionality of ceilings in various building and public facility spaces.

### Decorative Acoustic Boards

<table>
<thead>
<tr>
<th>PN: &lt;TRAVERTINE&gt; (Joint width: 4 mm)</th>
<th>PN: &lt;TRAVERTINE&gt; (Joint width: 4 mm)</th>
<th>PN: &lt;GRID 600&gt; (Joint width: 4 mm)</th>
<th>PN: &lt;GINGA 4&gt; (Joint width: 4 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 mm or 12 mm thick, 455 x 910 mm</td>
<td>12 mm thick, 600 x 1200 mm</td>
<td>9 mm or 12 mm thick, 600 x 600 mm</td>
<td>9 mm or 12 mm thick, 300 x 600 mm</td>
</tr>
</tbody>
</table>

### COLOR

- (R1)
- (N5)
- (B3)
- (G1)
- (Y1)

*The performance values and the certification labels are based on the Japanese test method and standards.
*DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.*
Decorative Acoustic Boards

<table>
<thead>
<tr>
<th>CURVED</th>
<th>FREE DESIGN CEILING</th>
</tr>
</thead>
</table>

SYSTEM CEILING

GRID

<table>
<thead>
<tr>
<th>&lt;NDF/LG&gt; 15 mm thick</th>
<th>&lt;LV&gt; 12 mm thick</th>
</tr>
</thead>
</table>

Indoor Pool Ceiling Materials MR

DAI-LOTONE MR

12 mm thick, 300 x 600 mm

DAIKEN's core products are presented here.

* The performance values and the certification labels are based on the Japanese test method and standards.
* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
Healthy Ceiling

Combined with sound absorption capability to suppress disturbing reverberations, humidity conditioning maintains comfortable humidity in housing.

![Image of a room with Healthy Ceiling installed]

**Specifications**

- **Dimensions**: 12 mm thick, 303 x 606 mm
- **Base material**: Humidity conditioning rock wool acoustic board (12mm)
- **Surface finish**: Pinhole and rib processing (<201/202/203/204> only), emboss, and acrylic emulsion coating
- **Edge processing**: Tongue-and-groove joint on all sides
- **Certifications**: Quasi-noncombustible material certified by the Minister of Land, Infrastructure, Transport and Tourism, QM-9817
  - Eco Mark certified product (recycled materials used, 53% slag) No. 08123013
  - Humidity conditioning building material, registered product name "Healthy and comfortable ceiling material DA-LOTONE" (Humidity conditioning rock wool acoustic board (12mm))
  - Registration number: TBE-002
  - Registration agency: Japan Construction Material & Housing Equipment Industries Federation
  - Low VOC
  - Deodorant
  - Formaldehyde regulations

**Deodorizing Effect to eliminate Major Odors in Daily Life, Such as Toilet Odor, Garbage Odor, and Pet Odor**

- **Deodorization Test on Ammonia (In-house Test)**
- **Deodorization Test on Trimethylamine (In-house Test)**

**Cross-sectional View** The value in parentheses indicates the dimension on long sides.

- **(FLAT)**
  - TA3001
  - TA3002
  - TA3003
  - TA3004
  - TA3005
  - TA3006
  - TA3007

- **(PATTERN)**
  - TA3101
  - TA3102
  - TA3103

- **(RIB/GGRID)**
  - TA3201
  - TA3202
  - TA3203
  - TA3204

**Formaldehyde Absorption**

- **Formaldehyde Absorption Coefficient**: 0.42 to 0.46 (N.R.C)

**Underlayment System**
- Direct Fix

- **Sound Absorption Coefficient**: 0.45 to 0.53 (N.R.C)
Sound absorption feature is to soften unpleasant household sounds and indoor noise for ease of listening to TV sound and human voices in large living rooms, etc.

Sound Absorption Effect to Suppress Excessive Sound Reverberation for Ease of Listening to TV Sound and Human Voices

Comparison of Reverberation Time Simulation Results (based on the sound absorption coefficient measurements on floorin)

Pinhole-processed surface ensures superb sound absorption performance

Specifications

Dimensions: 9 mm thick, 303 x 606 mm
Base material: Rock wool acoustic board
Surface finish: Pinhole and rib processing (<201/203> only), emboss (except for <201/203>), and acrylic emulsion coating
Edge processing: Tongue-and-groove joint on all sides

Formaldehyde regulations: Labelling exempted product

Cross-sectional View: The value in parentheses indicates the dimension on long sides.

The performance values and the certification labels are based on the Japanese test method and standards.

DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.
TA7

Easy-to-clean. Just wipe the ceiling surface with neutral detergent, recommended for heavy kitchen user.
TA7 features a refined geometric design.

TA6

Easy-To Clean. Just wipe the ceiling surface with neutral detergent, recommended for heavy user in the kitchen etc.
TA6 features a simple design with reasonable price.
Utilizing the know-how of installation method of ceiling system, DAIKEN has achieved both earthquake resistance and workability improvement.

After the Great East Japan Earthquake, the Japanese Building Standard Law was revised to require higher seismic performance for ceilings. However, there was a concern that fulfilling the demand with the conventional construction method would result in an increase in the construction workload. To address this issue, DAIKEN adopted a unique new ceiling construction method that can improve the seismic performance of ceilings in a short construction period with less workload. This solution uses a ceiling underlayment material that combines the benefits of conventional ceilings with those of system ceilings.

Easy-to-clean. Just wipe the ceiling surface with neutral detergent, recommended for heavy use in the kitchen etc.

Simplified Construction with Improved Safety

Improving Seismic Performance with Conventional Ceiling Method

High Seismic Performance to Withstand a Horizontal Load Equivalent to 2.2G.

Our new method showed a high seismic performance of 4,000 N with respect to the allowable ceiling proof stress in the “unit test” (static pressurization test) designated by the Ministry of Construction (the current Ministry of Land, Infrastructure, Transport and Tourism).

Improved Safety with Light-weight Rock Wool Decorative Acoustic Boards

Rock wool decorative acoustic boards have a low risk to human life in the event of falls.

Features:

- Joints need to be bound to joist retainers using clips and reinforcing metal fittings.
- High-rigidly diagonal tracing corresponding to the unit weight of the ceiling needs to be installed.

3 to 4 times the conventional construction workload is needed.

New Ceiling Construction Method

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

New Ceiling Construction Method

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.

One-push Underlaymeent Installation Combined with Excellent Workability to Realize a Short Construction Period

The new method contributes to the reduction of construction workload because the number of seismic braces is reduced.

Benefits of Conventional Ceiling Method

- Flexible design
- Usable for buildings in a variety of applications

Benefits of New Ceiling Method

- High-rigidly through the use of grid assembly
- Skilled design for room's initial and interior appearance

Earthquake resistance and workability improvement with comfortable indoor environment maintained.
Specification

Installation Guide

EXPOSED SYSTEM

REVEALED SYSTEM

Section perpendicular to Main T-Bar

Section perpendicular to Main T-Bar
SHIPLAP T-BAR SYSTEM

Section perpendicular to Main T-Bar

Tongued & Grooved Tile

Section perpendicular to Main M-Bar
A wide range of Engineered Wood Flooring provides a beautiful, natural, authentic wood finish. The textured design is stunning and the WPC floor adds a luxurious, timeless look to your home.

WPC Engineered Wood Flooring

Excellent stain resistant
Surface sealed WPC floors are stain and water resistant, durable and easy to maintain.

Strong and Durable WPC flooring prevent your floor get scratches easily.
Choosing a flooring material with sufficient hardness and strength is essential to prevent scratching when you drop something on it.

Pet Friendly Flooring

Excellent stain-, scratch- and slip-resistant floor surface are ideal for your pets.

Strong and ammonia resistant, simple maintenance, and stain resistant.

Eco Labels

- The performance values and the certification labels are based on the Japanese test method and standards.
- DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.

In daily life, it is inevitable that floors get stained over time. A key point to keep floors clean for a long time is to choose a flooring material with excellent stain-proof and wipeable features.

WPC uses a combination of wood and a plastic resin filling to achieve outstanding hardness and dent resistance. WPC also has a strong resistance to stains and water splashes. Therefore, WPC flooring is widely used for living rooms, bedrooms, children’s rooms, and even kitchens and bathrooms.

In July 2021, the revised Building Standard Law that provides regulations on sick building syndrome was enforced. In response to this, DAIKEN has been offering the highest F4-rank products whose installation floor area is not regulated by the revised Law. Moreover, for the door frame, baseboard, wall covering, and other parts that are not subject to the formaldehyde emission regulations, F4-rank equivalent materials are used.

In April 2008, standards with respect to the emission rate of VOC from building products were established by the Japan Testing Center for Construction Materials. DAIKEN is continuing to register its products with the “4VOC Standards Compliant” labeling system one after another.

In October 2008, the Japanese government, together with the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Internal Affairs and Communications, established standards with respect to the emission rate of VOC from building products. Improving the indoor environment through reducing VOC emissions will further improve the health of all occupants.

Industries Federation and other industrial associations. Although building material manufacturers conventionally used their own standards to indicate this, implementing the industry’s common standards helps customers choose products they need. From this reason, “4VOC Standards Compliant” is a label based on the industry’s voluntary labeling system with respect to the emission of VOC from building materials, operated by the Japan Construction Material & Housing Equipment Industries Federation and other industrial associations. Although building material manufacturers conventionally used their own standards to indicate this, implementing the industry’s common standards helps customers choose products they need. From this reason, “4VOC Standards Compliant” is a label based on the industry’s voluntary labeling system with respect to the emission of VOC from building materials, operated by the Japan Construction Material & Housing Equipment Industries Federation and other industrial associations. Although building material manufacturers conventionally used their own standards to indicate this, implementing the industry’s common standards helps customers choose products they need. From this reason, “4VOC Standards Compliant” is a label based on the industry’s voluntary labeling system with respect to the emission of VOC from building materials, operated by the Japan Construction Material & Housing Equipment Industries Federation and other industrial associations.

In April 2008, standards with respect to the emission rate of VOC from building products were established by the Japan Testing Center for Construction Materials. DAIKEN is continuing to register its products with the “4VOC Standards Compliant” labeling system one after another.
### YP76

**Beautiful and elegance Japanese Wood Surface with premium quality of WPC engineered flooring are resistant to dent, scratches, moisture and stains.**

#### Specifications

- **Dimensions**: 12 mm thick, 145 x 1,818 mm
- **Packaging material, quantity**: Cardboard case, 6 pieces (1.58 m²) per case
- **Package weight**: Approx. 14 kg/package
- **Base material**: Plywood with W hard base
- **Surface**: WPC treatment, natural wood (cedar/horse chestnut) thick single plate (approx. 2.0 mm), UV antimicrobial wear-resistant matte coating finish
- **Edge processing**: Tongue-and-groove joint on all sides, vertical & horizontal VR grooving (3P), chamfering on long sides and skipped chamfering on short sides
- **Formaldehyde regulations**: F4 rank JAS (Composite flooring)

#### Underlayment System

- **Underlayment System**
- **Slipper Uses**
- **For Residential Use**

#### Surface Finish

- **Surface Finish**: Matte

#### Surface Material

- **Surface Material**: WPC (Natural Wood)

#### Labels Related to Public Certifications and Industrial Associations

- **VOC Standards Compliant**

### YP74

**Unique and durable, WPC Flooring is a stunning engineered wood with a variety of natural veneer tones.**

#### Specifications

- **Dimensions**: 12 mm thick, 303 x 1,818 mm
- **Packaging material, quantity**: Cardboard case, 6 pieces (3.3 m²) per case
- **Package weight**: Approx. 30 kg/package
- **Base material**: Plywood with W hard base
- **Surface**: WPC treatment, natural wood thin single plate, horse chestnut/chestnut/cedar/king/Ipads/Japanese wingsnut/Japanese walnut straight/cross grain mixed random length board, UV antimicrobial wear-resistant natural coating finish
- **Edge processing**: Tongue-and-groove joint on all sides, vertical & horizontal VR grooving (3P), chamfering on long sides and skipped chamfering on short sides
- **Formaldehyde regulations**: F4 rank JAS (Composite flooring)

#### Underlayment System

- **Underlayment System**
- **Slipper Uses**
- **For Residential Use**

#### Surface Finish

- **Surface Finish**: Matte

#### Surface Material

- **Surface Material**: WPC (Natural Wood)

#### Labels Related to Public Certifications and Industrial Associations

- **VOC Standards Compliant**

### YP62

**Natural Japanese Wood by Daiken has an abundance of casual beauty. With strong grain highlighted by shades of honey, tan and cream, this flooring has comfortable style and universal appeal.**

#### Specifications

- **Dimensions**: 12 mm thick, 303 x 1,818 mm
- **Packaging material, quantity**: Cardboard case, 6 pieces (3.3 m²) per case
- **Package weight**: Approx. 30 kg/package
- **Base material**: Plywood with W hard base
- **Surface**: WPC treatment, natural wood thin single plate, beech/ash straight/cross grain mixed random length board, UV antimicrobial wear-resistant superfine coating finish
- **Edge processing**: Tongue-and-groove joint on all sides, vertical & horizontal VR grooving (3P), chamfering on long sides and skipped chamfering on short sides
- **Formaldehyde regulations**: F4 rank JAS (Composite flooring)

#### Underlayment System

- **Underlayment System**
- **Slipper Uses**
- **For Residential Use**

#### Surface Finish

- **Surface Finish**: Matte

#### Surface Material

- **Surface Material**: WPC (Natural Wood)

#### Labels Related to Public Certifications and Industrial Associations

- **VOC Standards Compliant**

---

*The performance values and the certification labels are based on the Japanese test method and standards.

*DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.

*The above flooring materials are not designed for use with shoes on.
### YP68

**Engineered Wood Flooring - WPC Flooring/Special Proceed Laminate Flooring**

**YP68**

WPC treated surface protect that inhibits fading and scratching, giving your new floors a hearty resilience for years to come.

**Specifications**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>12 mm thick, 303 x 1,818 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing material, quantity</td>
<td>Cardboard case, 6 pieces (3.3 m²) per case</td>
</tr>
<tr>
<td>Base material</td>
<td>WPC treatment, natural wood thin single plate, beech/ash straight/cross grain mixed random length board, UV antimicrobial wear-resistant matte finish</td>
</tr>
<tr>
<td>Surface processing</td>
<td>Tongue-and-groove joint on all sides, vertical &amp; horizontal V grooving (3P), chamfering on long sides and skipped chamfering on short sides</td>
</tr>
<tr>
<td>Formaldehyde regulations</td>
<td>F4 rank JAS (Composite flooring)</td>
</tr>
</tbody>
</table>

**YP68-38**

**YP68-35**

**YP68-21**

### YP77

**Impressive matt finish surface beautifully crafted through ultra, realistic designs and the latest in innovative technologies.**

**Specifications**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>12 mm thick, 303 x 1,818 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing material, quantity</td>
<td>Cardboard case, 6 pieces (3.3 m²) per case</td>
</tr>
<tr>
<td>Base material</td>
<td>Plywood with W hard base</td>
</tr>
<tr>
<td>Surface processing</td>
<td>Tongue-and-groove joint on all sides, vertical &amp; horizontal V grooving, chamfering on long sides and slight chamfering on short sides (5P)</td>
</tr>
<tr>
<td>Formaldehyde regulations</td>
<td>F4 rank JAS (Composite flooring)</td>
</tr>
</tbody>
</table>

**YP7701-50**

**YP7701-13**

**YP7701-70**

### YP75

The glossy surface with characteristic graining and beautiful pattern sets it apart, bringing a wonderfully unique look to your home.

**Specifications**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>12 mm thick, 303 x 1,818 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing material, quantity</td>
<td>Cardboard case, 6 pieces (3.3 m²) per case</td>
</tr>
<tr>
<td>Base material</td>
<td>Plywood with W hard base</td>
</tr>
<tr>
<td>Surface processing</td>
<td>Tongue-and-groove joint on all sides, vertical &amp; horizontal V grooving, chamfering on long sides and slight chamfering on short sides</td>
</tr>
<tr>
<td>Formaldehyde regulations</td>
<td>F4 rank JAS (Composite flooring)</td>
</tr>
</tbody>
</table>

**YP75-38**

**YP75-35**

**YP75-21**

### Made In Japan

*The performance values and the certification labels are based on the Japanese test method and standards.*

*DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.*
Graphiarts Superfine Engineered wood flooring with a stunning mirror finish and a variety of marble texture.

**Specifications**

- **Dimensions**: 12 mm thick, 303 x 1,818 mm
- **Base material**: Plywood with W hard base
- **Surface**: Special refined sheet
- **Edge processing**: Tongue-and-groove joint on all sides, vertical VR grooving, chamfering on long sides and slight chamfering on short sides
- **Formaldehyde regulations**: F4-rank JAS (Composite flooring)

**Features**

- Textures and tones of the world’s most beautiful species converge in this collection.
- Tongue-and-groove joint on all sides.
- UV antimicrobial wear-resistant matte coating finish.

**Uses**

- **Slipper Uses**: Uses
- **Edge processing**: Edge processing
- **Surface**: Surface
- **Base material**: Base material
- **Packing material, quantity**: Package weight

---

**YN71**

The textures and tones of the world's most beautiful species converge in this collection of laminate flooring from Daiken: A rich array of styles designed to inspire your home spirit.

**Specifications**

- **Dimensions**: 12 mm thick, 303 x 1,818 mm
- **Base material**: Plywood with W hard base
- **Surface**: Special toughened film, lap finishing on all sides
- **Edge processing**: Tongue-and-groove joint on all sides, vertical VR grooving, chamfering on long sides and slight chamfering on short sides
- **Formaldehyde regulations**: F4-rank JAS (Composite flooring)

**Features**

- Realistic designs and the latest in innovative technologies.
- Plywood with W hard base
- 12 mm thick, 303 x 1,818 mm
- Special olefin sheet, packing material, quantity

**Uses**

- **Slipper Uses**: Uses
- **Edge processing**: Edge processing
- **Surface**: Surface
- **Base material**: Base material
- **Packing material, quantity**: Package weight

---

**YN77**

The WPC flooring with Japanese wood surface accentuates the beauty and character of each individual plank. This collection features fantastic exotic wood species patterns, with deep, rich color and unique grain patterns.

**Specifications**

- **Dimensions**: 12 mm thick, 178 x 1,818 mm
- **Base material**: Plywood with W hard base
- **Surface**: Special toughened film, lap finishing on all sides
- **Edge processing**: Tongue-and-groove joint on all sides, round chamfering on short sides and round chamfering on long sides
- **Formaldehyde regulations**: F4-rank JAS (Composite flooring)

**Features**

- Special toughened film, packing material, quantity
- Special toughened film, lap finishing on all sides
- Special toughened film, lap finishing on all sides

**Uses**

- **Slipper Uses**: Uses
- **Edge processing**: Edge processing
- **Surface**: Surface
- **Base material**: Base material
- **Packing material, quantity**: Package weight

---

**YE36**

YE36 is designed especially for families with pets, children and active lifestyles.

**Specifications**

- **Dimensions**: 12 mm thick, 303 x 1,818 mm
- **Base material**: Plywood with W hard base
- **Edge processing**: Tongue-and-groove joint on all sides, vertical VR grooving, chamfering on long sides and slight chamfering on short sides
- **Formaldehyde regulations**: F4-rank JAS (Composite flooring)

**Features**

- Wood-like texture and appearance.
- 12 mm thick, 303 x 1,818 mm
- Plywood with W hard base
- Slip-proof special toughened film

**Uses**

- **Slipper Uses**: Uses
- **Edge processing**: Edge processing
- **Surface**: Surface
- **Base material**: Base material
- **Packing material, quantity**: Package weight

---

*The performance values and the certification labels are based on the Japanese test method and standards.

- **Labels Related to Public Certifications and Industrial Associations**

---

*The above flooring materials are not designed for use with shoes on.*
Made by engineered wood with higher janka hardness to prevent dent and scratch resistance to home traffic.

■ Plain View

1. Strong crack, fade, and wear resistance
   Toughened surface coating ensures outstanding resistance to cracking, fading, and wear.

2. Single-plate crack prevention
   Unique chamfering technology prevents cracks on the single plate.

3. Floor heating ready
   Our products are all made of plywood with high thermal stability, causing no warping and cracking in a severe environmental test (at a temperature range of -20 to 90°C).

YD78

Unique uneven surface design delivers outstanding wood texture.
DAIKEN’s proprietary surface processing technology has realized this high-level surface treatment.
YD78 fits well with modern or basic interior design.

■ Plain View

For Residential Use Slipper Use 15 mm Thick Surface Material
Natural Wood

For Residential Use Slipper Use 12 mm Thick Surface Material
Natural Wood

* DAIKEN CORPORATION does not guarantee that the products listed here conform to the laws and regulations of the country or region where they are being used.

* The above flooring materials are not designed for use with shoes on.