Metsä Wood Phoenix plywood products provide enhanced fire performance for uses in transport industry. The product range consists of birch plywood and Sonex Light sound-absorbing sandwich panels overlaid with a special aluminium overlay. Phoenix products meet the requirements of many demanding end use applications.

APPLICATIONS
The combination of fire performance, sound insulation properties and good strength-to-weight ratio make Phoenix an excellent choice for various applications in transport industry, like railway wagons and bus floors.

MAJOR ADVANTAGES
- Enhanced fire performance
- Good sound reduction properties with Phoenix Sonex Light
- Versatile uses – surface can be painted or overlaid
- High strength/weight ratio
  - Strong and rigid
  - Light and dimensionally stable
- Air tight surface
  - Water vapour barrier
- Environmentally friendly
  - No endangered wood species
  - No hazardous chemicals
  - Low formaldehyde emissions
  - PEFC certified

BASE PLYWOOD
The base plywood of Metsä Wood Phoenix Birch is Metsä Wood Birch, which is made of cross-bonded 1.4 mm thick birch veneers and bonded with weather and boil-resistant phenol formaldehyde adhesive.

The base plywood of Metsä Wood Phoenix Sonex Light is Metsä Wood Sonex Light, which is a composite panel consisting of Metsä Wood birch plywood and Amorim Cork composite sound reduction material.

OVERLAY AND SURFACE PROPERTIES
Metsä Wood Phoenix has a special aluminum overlay. The primed aluminum overlay allows the surface to be painted or overlaid in the customers’ own process according to the end use requirements. The compatibility of a surface coating or an adhesive should be confirmed from the coating supplier. Additionally a test coating is recommended prior to use.

PANEL EDGES
Panel edges are sealed against moisture absorption with acrylic edge sealing paint. The colour of the edge sealing is transparent. Even though the edge sealing slows down the absorption of moisture into the panel, it does not eliminate it completely.
FIRE CLASSIFICATION
The fire performance of Metsä Wood Phoenix products has been tested according to several standards and directives:

<table>
<thead>
<tr>
<th>Phoenix Birch</th>
<th>Phoenix Sonex Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 4545-4:2-2012- R00 (equal to EN 4545-4:2-2013)</td>
<td>H1 to H3</td>
</tr>
<tr>
<td>EN 4545-4:2-2013, R1, R7</td>
<td>H1 to H3</td>
</tr>
<tr>
<td>DIN 5510-2: 2009</td>
<td>SF3</td>
</tr>
<tr>
<td>UNE 23721: 1990, UNE 23727: 1990</td>
<td>MIF0</td>
</tr>
<tr>
<td>BS 6883: 1999</td>
<td>1a</td>
</tr>
<tr>
<td>ASTM E362, ASTM E662, Bombardier SMP 100C, Boeing BSS 7239</td>
<td>–</td>
</tr>
<tr>
<td>EN 13501-1: 2007</td>
<td>B-s1,d0</td>
</tr>
<tr>
<td>CEI UNI 11170: 2010</td>
<td>LR1 to LR4</td>
</tr>
</tbody>
</table>

SOUND INSULATION WITH SANDWICH PANELS
Metsä Wood Phoenix Sonex Light has good sound reduction properties, Rw index 30-31 dB, depending on the panel structure.

** FURTHER INFORMATION
For more information please see Metsä Wood Sonex Light Product Data Sheet.

PANEL SIZES
Metsä Wood Phoenix is available in sizes:
- 1220 / 1250 / 1525 mm x 2440 / 2500 / 3050 mm

Other sizes are available on request.

SIZE TOLERANCES
Measured in accordance with standard EN 324, the plywood size and squareness tolerances meet EN 315 requirements.

<table>
<thead>
<tr>
<th>LENGTH / WIDTH</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1000 mm</td>
<td>±1 mm</td>
</tr>
<tr>
<td>1000-2000 mm</td>
<td>±2 mm</td>
</tr>
<tr>
<td>&gt; 2000 mm</td>
<td>±3 mm</td>
</tr>
<tr>
<td>Squareness</td>
<td>±0.1 % or ±1 mm/m</td>
</tr>
<tr>
<td>Edge straightness</td>
<td>±0.1 % or ±1 mm/m</td>
</tr>
</tbody>
</table>

BONDING CLASSES
Metsä Wood Phoenix base plywood panels are bonded with a weather and boil-resistant phenol formaldehyde adhesive (WBP, BFU, AW, exterior).

The gluing meets the requirements of the following international standards:
- EN 314-2 / Class 3 (exterior)
- DIN 68705-3 / BFU 100
- BS 6566 Part / WBP

The aluminium overlay is bonded with a weather resistant adhesive (EN 204 class D4).

FORMALDEHYDE EMISSIONS
Determined according to EN 717-2, the formaldehyde emitted by Metsä Wood Phoenix products falls far below the Class E1 requirement of ≤ 3,5 mg/(m²·h). The formaldehyde emission of Metsä Wood Phoenix Birch is approximately 0,1 mg/(m²·h).

PACKING
Metsä Wood Phoenix panels are packed in moisture resistant plastic wrapping. Packing quantity information is available on Metsä Wood Sonex Light and Birch Product Data Sheets.

FURTHER INFORMATION
- Metsä Wood Phoenix Birch Declaration of Performance (www.metsawood.com/dop)
- Metsä Wood Sonex Light Product Data Sheet
- Metsä Wood Birch Product Data Sheet
- Metsä Wood Spruce Phoenix Product Data Sheet