Furnishing Knowledge*

Product: Genius architectural walls are designed and manufactured offsite, then installed in the building, with a floor-to-ceiling vertical span and meet the requirements of the International Building Code. These interior walls are constructed using ecologically sound materials and manufacturing processes. The wall system integrates with workspaces, storage and accessories to create streamlined workstations, conference rooms, training rooms and more. They may be moved to another location without losing any performance characteristics. This EPD is for a wood panel manufactured in Manitowoc, Wisconsin. FSC wood is available upon request.

Producer: KI is a contract furniture company that manufactures innovative furniture and movable wall systems for educational, university, business and government markets.

Independent Verification

Independent verification of the declaration and data, according to ISO 14025:

Verifier: Thomas Gloria
tgloria@industrial-ecology.com
LCACP#: 2008-3

Summary of Life Cycle Impacts and Inventory

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Impact Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate Change</td>
<td>120 kg CO₂-eq</td>
</tr>
<tr>
<td>Acidification</td>
<td>1.3 kg SO₂-eq</td>
</tr>
<tr>
<td>Eutrophication</td>
<td>0.45 kg N-eq</td>
</tr>
<tr>
<td>Ozone Depletion</td>
<td>7.9x10⁻⁶ kg CFC-11-eq</td>
</tr>
<tr>
<td>Photochemical Smog</td>
<td>10 kg O₃-eq</td>
</tr>
<tr>
<td>Ecotoxicity</td>
<td>0.74 CTUe</td>
</tr>
<tr>
<td>Human Health – Air</td>
<td>0.10 kg PM2.5-eq</td>
</tr>
<tr>
<td>Primary Energy Consumption</td>
<td>2,900 MJ non-renewable</td>
</tr>
<tr>
<td></td>
<td>360 MJ renewable</td>
</tr>
<tr>
<td>Freshwater Consumption</td>
<td>1,800 L</td>
</tr>
<tr>
<td>Waste Production</td>
<td>0.013 kg hazardous</td>
</tr>
<tr>
<td></td>
<td>44 kg non-hazardous</td>
</tr>
<tr>
<td>Material Resource Consumption</td>
<td>110 kg non-renewable</td>
</tr>
<tr>
<td></td>
<td>13 kg renewable</td>
</tr>
<tr>
<td>Land Use</td>
<td>33 m²-yr</td>
</tr>
</tbody>
</table>
### LIFE CYCLE IMPACT ASSESSMENT RESULTS

For one square meter of interior wall conforming to the International Building Code for thirty years, using TRACI 2.1 Life Cycle Indicators (CML in parentheses):

<table>
<thead>
<tr>
<th>Life Cycle Impact</th>
<th>Total</th>
<th>Stage I</th>
<th>Stage II</th>
<th>Stage III</th>
<th>Stage IV:</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Production</td>
<td>Installation</td>
<td>Use</td>
<td>End of Life</td>
<td></td>
</tr>
<tr>
<td>Climate Change</td>
<td>120</td>
<td>94</td>
<td>12</td>
<td>0.00</td>
<td>16</td>
<td>kg CO₂-eq</td>
</tr>
<tr>
<td></td>
<td>(120)</td>
<td>(94)</td>
<td>(12)</td>
<td>(0.00)</td>
<td>(16)</td>
<td>kg CO₂-eq</td>
</tr>
<tr>
<td>Acidification</td>
<td>1.3</td>
<td>1.2</td>
<td>0.088</td>
<td>0.00</td>
<td>0.018</td>
<td>kg SO₂-eq</td>
</tr>
<tr>
<td></td>
<td>(1.4)</td>
<td>(1.4)</td>
<td>(0.077)</td>
<td>(0.00)</td>
<td>(0.018)</td>
<td>kg SO₂-eq</td>
</tr>
<tr>
<td>Eutrophication</td>
<td>0.45</td>
<td>0.19</td>
<td>0.035</td>
<td>0.00</td>
<td>0.23</td>
<td>kg N-eq</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.11)</td>
<td>(0.022)</td>
<td>(0.00)</td>
<td>(0.085)</td>
<td>kg PO₄³⁻-eq</td>
</tr>
<tr>
<td>Ozone Depletion</td>
<td>7.9×10⁻⁶</td>
<td>6.3×10⁻⁶</td>
<td>1.4×10⁻⁶</td>
<td>0.00</td>
<td>1.6×10⁻⁷</td>
<td>kg CFC-11-eq</td>
</tr>
<tr>
<td></td>
<td>(7.9×10⁻⁶)</td>
<td>(6.3×10⁻⁶)</td>
<td>(1.4×10⁻⁶)</td>
<td>(0.00)</td>
<td>(1.6×10⁻⁷)</td>
<td>kg CFC-11-eq</td>
</tr>
<tr>
<td>Photochemical Smog</td>
<td>10</td>
<td>7.8</td>
<td>2.0</td>
<td>0.00</td>
<td>0.24</td>
<td>kg O₂-eq</td>
</tr>
<tr>
<td></td>
<td>(0.071)</td>
<td>(0.063)</td>
<td>(3.4×10⁻¹)</td>
<td>(0.00)</td>
<td>(3.9×10⁻³)</td>
<td>kg C₂H₄-eq</td>
</tr>
<tr>
<td>Ecotoxicity</td>
<td>0.74</td>
<td>0.24</td>
<td>0.49</td>
<td>0.00</td>
<td>3.0×10³</td>
<td>CTUe</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.43)</td>
<td>(0.020)</td>
<td>(0.00)</td>
<td>(0.041)</td>
<td>kg 1,4-DCB-eq</td>
</tr>
<tr>
<td>Human Health- Air</td>
<td>0.10</td>
<td>0.095</td>
<td>6.2×10⁻³</td>
<td>0.00</td>
<td>1.2×10³</td>
<td>kg PM2.5-eq</td>
</tr>
</tbody>
</table>
LIFE CYCLE INVENTORY INFORMATION

For one square meter of interior wall conforming to the International Building Code for thirty years.

<table>
<thead>
<tr>
<th>Inventory Item</th>
<th>Amount</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Energy Consumption</td>
<td>2,900</td>
<td>MJ non-renewable</td>
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<td>13</td>
<td>kg renewable</td>
</tr>
<tr>
<td>Land use</td>
<td>33</td>
<td>m² yr</td>
</tr>
</tbody>
</table>

HAZARDOUS MATERIAL CONTENT

For one square meter of interior wall conforming to the International Building Code for thirty years (at least 0.1% using California DTSC Candidate Chemical List).

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS Number</th>
<th>Amount (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>21%</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>0.81%</td>
</tr>
</tbody>
</table>

ADDITIONAL ENVIRONMENTAL INFORMATION

For one square meter of interior wall conforming to the International Building Code for thirty years.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC emissions per BIFMA X7.1</td>
<td>passed</td>
</tr>
<tr>
<td>Recycled content</td>
<td>15% (pre-consumer)</td>
</tr>
<tr>
<td></td>
<td>0.92% (post-consumer)</td>
</tr>
<tr>
<td>Recyclable content*</td>
<td>32%</td>
</tr>
<tr>
<td>Organization's use of environmental management system</td>
<td>ISO 9001</td>
</tr>
<tr>
<td>Other environmental certification programs</td>
<td>level 2, Indoor Advantage Gold, optional FSC wood</td>
</tr>
</tbody>
</table>

*Recyclable portion based on steel and aluminum in the wall panel. Recycling facilities may not be available in all areas.