HEAVY DUTY DECKING SYSTEM

SAFPLANK HD®

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Features
SAFPLANK HD® is a high strength system of fiberglass planks designed to form a continuous solid surface. SAFPLANK HD® is intended to replace wood, aluminum or steel planks in environments where corrosion or rotting creates costly maintenance problems or unsafe conditions.
SAFPLANK HD® panels are:
- Corrosion Resistant
- Strong
- Easy to Install
- Lightweight
- Easy to Maintain
- Non-sparking

Sizes
SAFPLANK HD® is available in 6" (152.4mm) deep panels in 36" (914.4mm) widths. Stock panels are available in 24' (7.32m) lengths. Other lengths are available upon request. SAFPLANK HD® may be ordered with a grit surface or with a smooth surface for non-pedestrian applications.

Materials of Construction
SAFPLANK HD® is a composite of fiberglass reinforcements (glass roving and continuous filament mat) and a thermoset resin system. The pultrusion process is used to produce the panels. Planks can be manufactured using polyester resin to ANSI/NSF standard 61 certified for potable water applications, if required.
The standard resin system is a slate gray fire retardant polyester resin meeting the requirements of Class 1 flame spread rating of 25 or less per ASTM E-84 and the self-extinguishing requirements of ASTM D-635. The resin is UV inhibited and the composite incorporates a surface veil on all exposed surfaces for enhanced corrosion and UV protection. Other resins and colors are available upon request.
The standard grit system for SAFPLANK HD® is a polyurethane based medium grit. This grit system is recommended for light pedestrian traffic only. Other grit systems available include epoxy medium and epoxy coarse and may be more appropriate for applications with heavier traffic.

Applications
SAFPLANK HD® is designed to be used for numerous applications including:
- Pedestrian Walkways
- Windwalls
- Roofing Walkways
- Concrete Forming Systems
- Odor Control Covers
- Dock Surfacing
- Cellular Wall Panels
- Temporary Flooring
### Uniform Load (Deflection in inches (mm))

**LOAD in LB / SQUARE FOOT (PSF) or KG / SQUARE METER (KG/M²)**

\[
I = 129.8 \text{ in.}^4, A = 25.0 \text{ in.}^2, \text{wt} = 21.0 \text{ lb / lin. ft. or } I = 5.4 \times 10^7 \text{ mm}^4, A = 16,129 \text{ mm}^2, \text{wt} = 31.32 \text{ kg / lin. m}
\]

#### Table 1: Uniform Load (Deflection in inches (mm))

<table>
<thead>
<tr>
<th>SPAN</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10 ft</strong></td>
<td><strong>30.5 m</strong></td>
<td>0.07</td>
<td>1.78</td>
<td>1731</td>
<td>0.10</td>
<td>2.54</td>
<td>1154</td>
<td>3.56</td>
</tr>
<tr>
<td><strong>12 ft</strong></td>
<td><strong>3.66 m</strong></td>
<td>0.14</td>
<td>3.56</td>
<td>1002</td>
<td>0.22</td>
<td>5.59</td>
<td>668</td>
<td>7.37</td>
</tr>
<tr>
<td><strong>14 ft</strong></td>
<td><strong>4.27 m</strong></td>
<td>0.27</td>
<td>6.86</td>
<td>631</td>
<td>0.40</td>
<td>10.16</td>
<td>420</td>
<td>13.46</td>
</tr>
<tr>
<td><strong>16 ft</strong></td>
<td><strong>4.88 m</strong></td>
<td>0.45</td>
<td>11.43</td>
<td>423</td>
<td>0.68</td>
<td>17.27</td>
<td>282</td>
<td>23.11</td>
</tr>
<tr>
<td><strong>18 ft</strong></td>
<td><strong>5.49 m</strong></td>
<td>0.73</td>
<td>18.54</td>
<td>297</td>
<td>1.09</td>
<td>27.69</td>
<td>198</td>
<td>37.08</td>
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<tr>
<td><strong>20 ft</strong></td>
<td><strong>6.10 m</strong></td>
<td>1.11</td>
<td>28.19</td>
<td>216</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>22 ft</strong></td>
<td><strong>6.71 m</strong></td>
<td>1.62</td>
<td>41.15</td>
<td>163</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### Notes:

- **Contact Strongwell for higher load conditions than what is tabulated.**
- Values are limited to deflection ratios less than L/150 or a maximum span of 22 feet (6.71 meters).

### Concentrated Line Load (Deflection in inches (mm))

**LOAD in LB / FOOT of WIDTH or KG / METER of WIDTH**

\[
I = 129.8 \text{ in.}^4, A = 25.0 \text{ in.}^2, \text{wt} = 21.0 \text{ lb / lin. ft. or } I = 5.4 \times 10^7 \text{ mm}^4, A = 16,129 \text{ mm}^2, \text{wt} = 31.32 \text{ kg / lin. m}
\]

#### Table 2: Concentrated Line Load (Deflection in inches (mm))

<table>
<thead>
<tr>
<th>SPAN</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
<th>Deflection</th>
<th>L/Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>100 (148.82)</strong></td>
<td><strong>300 (446.45)</strong></td>
<td><strong>600 (892.90)</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>10 ft</strong></td>
<td><strong>3.05 m</strong></td>
<td>0.03</td>
<td>0.76</td>
<td>4327</td>
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<td>2.03</td>
<td>1442</td>
<td>0.17</td>
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<tr>
<td><strong>12 ft</strong></td>
<td><strong>3.66 m</strong></td>
<td>0.05</td>
<td>1.27</td>
<td>3005</td>
<td>0.14</td>
<td>3.56</td>
<td>1002</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>14 ft</strong></td>
<td><strong>4.27 m</strong></td>
<td>0.08</td>
<td>2.03</td>
<td>2207</td>
<td>0.23</td>
<td>5.84</td>
<td>736</td>
<td>0.46</td>
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<tr>
<td><strong>16 ft</strong></td>
<td><strong>4.88 m</strong></td>
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<td>2.79</td>
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<td>0.34</td>
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<td>563</td>
<td>0.68</td>
</tr>
<tr>
<td><strong>18 ft</strong></td>
<td><strong>5.49 m</strong></td>
<td>0.16</td>
<td>4.06</td>
<td>1335</td>
<td>0.49</td>
<td>12.44</td>
<td>445</td>
<td>0.97</td>
</tr>
<tr>
<td><strong>20 ft</strong></td>
<td><strong>6.10 m</strong></td>
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<td>5.59</td>
<td>1082</td>
<td>0.67</td>
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<td>361</td>
<td>1.33</td>
</tr>
<tr>
<td><strong>22 ft</strong></td>
<td><strong>6.71 m</strong></td>
<td>0.30</td>
<td>7.62</td>
<td>894</td>
<td>0.89</td>
<td>22.61</td>
<td>298</td>
<td></td>
</tr>
</tbody>
</table>

#### Notes:

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### Material Property Data:

- **Full Section Modulus of Elasticity = 3,000,000 psi (minimum) or 20.6 x 10⁶ N/mm²**
- **Coefficient of Thermal Expansion (LW) = 4.7 x 10⁻⁶ in./in./°F or 8.5 x 10⁻⁶ mm/mm/°C**
- **Coefficient of Thermal Expansion (CW) = 13.9 x 10⁻⁶ in./in./°F or 2.4 x 10⁻⁵ mm/mm/°C**
- **EXTREN® Minimum Material Strength Properties for Lengthwise and Crosswise Directions**