USG STRUCTURAL PANEL
RECOMMENDED FASTENERS

Fastening USG Structural Concrete Panels, also known as USG Structo-Crete™ Panels, properly to wood, cold-formed or hot-rolled steel framing is key to ensuring their long-term performance as a structural component. The recommended fasteners meet several criteria to insure they have adequate pull-out, pull-through, and slip performance. Furthermore, these fasteners meet or exceed 1000 hours corrosion resistance requirement when tested in accordance with ASTM B117. High corrosion resistance is critical because of the panel pH, and when coupled with any moisture exposure, including high humidity, this may deteriorate a non-corrosion resistant fastener.

Table Notes:
1. CFS = cold-formed structural steel; HRS = hot-rolled structural steel; Lumber = specific gravity 0.42 or greater. Gauge/thickness of steel, fastener min. end distance, and joist min. flange width is identified for each fastener. Project specific framing gauge, size and type is determined by the engineer, architect or design professional of record.
2. Cold-formed steel shall comply with AISI-General, with a minimum 54 mils or .0538-inch base metal thickness (No.16 gauge) and a minimum C60 galvanized coating.
3. 33 mil (structural 20 ga) is for gravity loads only.
4. Represents the minimum distance from the end (square cut) of the panel a fastener may be inserted.
5. Fastener pull-through is 581 lbs. (264 kg) and is the minimum average ultimate tested capacity for all tabulated fasteners.
6. The engineer or designer of record shall apply an appropriate safety factor (ASD) or resistance factor (LRFD).
7. Any length of the approved fasteners may be used provided a minimum of 3 full threads penetrate the steel framing.
8. SENCO 8d ring shank nails are manufactured with a length of 2-3/8 in., head diameter of 0.266 in. and a shank diameter of 0.113 in. Equivalent 8d ring shank nails meeting these dimensional requirements may be utilized when approved by the engineer or designer of record.

<table>
<thead>
<tr>
<th>Framing Type</th>
<th>Min. End Distance</th>
<th>Min. Flange Width</th>
<th>Fastener Manufacturer</th>
<th>Part Number</th>
<th>Fastener Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>54-97 mil (16-12 ga) CFS</td>
<td>1/2&quot; [13mm]</td>
<td>1-5/8&quot; [41mm]</td>
<td>Grabber Construction Products, Inc.</td>
<td>CGH8158LG</td>
<td>#8 x 1-5/8&quot; Winged Flat Wafer Head Self-Drilling Screw</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Simpson Strong-Tie Company, Inc.</td>
<td>CBSQI58S</td>
<td>#8 x 1-5/8&quot; Winged Self-Drilling Screw</td>
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<tr>
<td>33-43 mil (20-18 ga) CFS</td>
<td>1&quot; [25mm]</td>
<td>2-5/8&quot; [67mm]</td>
<td>Grabber Construction Products, Inc.</td>
<td>CGH8158LG</td>
<td>#8 x 1-5/8&quot; Winged Flat Wafer Head Self-Drilling Screw</td>
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<tr>
<td>SPF Lumber</td>
<td>5/8&quot; [16mm]</td>
<td>1-7/8&quot; [48mm]</td>
<td>Grabber Construction Products, Inc.</td>
<td>C8200L2M</td>
<td>#8 x 2&quot; Flat Head Type 17 Nibs, GrabberGard</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Simpson Strong-Tie Company, Inc.</td>
<td>WSNTLG2S</td>
<td>#8 x 2&quot; Flat Head Twin Threads Nibs</td>
</tr>
<tr>
<td></td>
<td>1/2&quot; [13mm]</td>
<td>1-5/8&quot; [41mm]</td>
<td>SENCO Brands, Inc.</td>
<td>GL24AABF</td>
<td>8d Ring Shank Nails</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Muro North America, Inc.</td>
<td>RSM645WFL-GY</td>
<td>M6.0 x 45 mm Winged Self-Drilling Screw</td>
</tr>
</tbody>
</table>
Notes:

- In accordance with code reports: PER-13067 for Subfloor, PER-14076 for Roof Deck, PER-15092 for Foundation Wall, and ESR-1792 for Subfloor.
- Use only fasteners recommended by USG and are corrosion resistant for use with USG Structural Panels to insure the system being installed will perform as expected as a structural component of your project.
- Install using the recommended spacing and distance from the ends (square cut) and edges (tongue & groove) of the panel.
- Do not use a larger diameter fastener unless specified by the design professional of record for the project.

Tips:

- Use a stand-up screw gun for ease of installation.
- Allow the gun and screw to do the work – don’t force it.
- Change drive bits regularly.
- Fasteners should be set flush with the surface of the panel.
- Insert fasteners as close to vertical as possible.
- Do not use hex head screws on surfaces where USG Structural Panels will be applied to prevent panel damage. Use pan heads or similar.
- Clean stand-up gun head regularly with clean, dry air. No oil, graphite or other lubricants.