



# DragonBoard® 3/4" Sub-Flooring Installation Instructions

**DragonBoard® USA**  
Structural Subfloor Panel

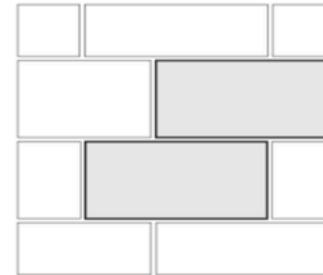
**Handling & Storage** - DragonBoard should be stored in a cool dry place, like any other sheet goods. For jobsite storage, units of DragonBoard can be stacked 4 high on top of dunnage to keep the pallets off the ground. The Panels should be carried on edge, avoiding damaging corners and shiplap edges. Use dunnage in high traffic areas after the panel is installed to protect the subfloor from damage, which could cause issues with the flooring installation.

**Job Preparation** - Please review the installation instructions prior to commencement of the framing installation and subfloor installation. Please contact our technical department with any questions.

**Board Orientation** - DragonBoard is smooth on one side and rough on the other. Both surfaces are working surfaces. The smooth side is ideal for the application of finished flooring, such as carpet or resilient flooring. The rough side provides excellent adhesion when applying ceramic tiles, stone, concrete toppings or other decorative materials. Once the smooth side or the rough side is installed, maintain that orientation throughout the installation.

**Cutting** - DragonBoard can be cut with a circular saw. Use a carbide tipped blade such as Irwin 6T or Diablo PCD. Support both ends while cutting. Wear safety glasses and a dust mask.

**Board Placement** - The 4 ft edge of the panel should have a  $1/16$ " (1.5mm) gap (the thickness of a penny) to accommodate movement when attached to Cold Formed Steel framing and  $1/8$ " gap when attached to wood framing. Install DragonBoard in a running bond pattern, per illustration in this section. The long edge or the shiplap edge of DragonBoard is installed perpendicular to the framing. Do not install strips of DragonBoard that are less than 24" wide. Strips that are less than 24" wide need to be fully supported with blocking.



**Edge Support** - Strips less than 24" wide need to be supported by framing.

## ADHESIVES

DragonBoard shiplap seams require a  $1/4$ " bead of adhesive applied before placement of the next sheet. Do not allow adhesive to skin over. Use ASTM D3498 compliant adhesives such as:

**PEMCO** - 5100 non-flammable, solvent free, zero V.O.C. Polyurethane Adhesive

**BOSTIK** - Heavy Duty Construction Adhesive

**OSI** - SF450 Heavy Duty Subfloor & Construction Adhesive

**LOCTITE** - PL400 Subfloor Adhesive/Loctite PL Premium Polyurethane Adhesive

## **FASTENERS**

**Cold-Formed Steel (CFS)** - #8 fine thread self-tapping flat head screw with nibs such as Grabber CGH8158LG, Simpson CBSQ or equivalent.

The drill wings on the tip prevent panel uplift (only for use into steel 18ga or heavier), while the nibs countersink the head - resulting in a tighter, smoother finish on top of the panel.

Grabber CGH8158LG sheathing to CFS



Simpson CBSQ sheathing to CFS



**Wood** - High/low thread, flat head screw with nibs such as Simpson CB3BLGHL collated screw Simpson.

CB3BLGHL sheathing to Wood



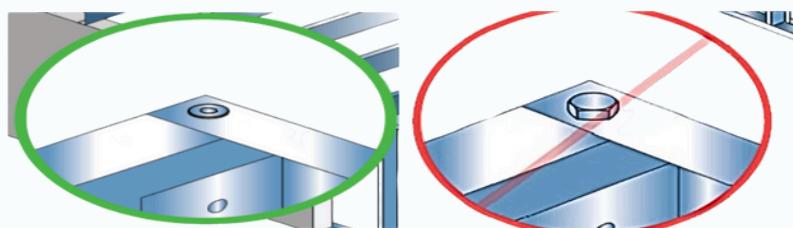
**Fastener Spacing** - Fasteners should be installed  $\frac{3}{4}$ " -  $\frac{5}{8}$ " (15-18mm) from panel edge and never closer than  $\frac{1}{2}$ " (12mm). A flange size of 2" (50mm) is highly recommended. Fastener spacing should be installed 8" inches on center around the perimeter of the panel and 12" in the field. Start fastener installation at one end of the panel, then continue installing fasteners until completion. Do not install the fasteners directly in the corner. Maintain a minimum of a 2" setback from the corner of the panel and a 3" minimum setback from the adjacent corner.

**Framing Installation** - Please follow the project engineer's requirements for the correct size and gauge of cold formed steel framing. Follow the same requirements for a wood framing installation.

DragonBoard recommends that a 2" flange joist is installed for ease of the panel fastener attachment setback.

All framing is to be installed per the manufacturer's installation instructions. See North American Standard for Cold-Formed Steel Structural Framing (AISI S240) section B - 1.2.3 for alignment framing requirements.

The top flange of the framing should be free of any protruding fasteners, debris or blocking and bracing that is out of plane with the top edge of the floor joists. If fasteners are required on the top edge of the framing, use low profile fasteners, such as "panhead" screws which allow DragonBoard to sit flush on top of the framing.



**Underlayment** - Always follow the flooring manufacturer's installation instructions. In certain circumstances, isolation membranes and seam bridging membranes are called for.

**Seams** - When laying resilient flooring such as VCT, Vinyl plank or Linoleum over DragonBoard, all seams should be filled with a polyurea or modified epoxy seam filler and shaved or sanded flush to create a uniformly smooth surface to avoid "telegraphing" uneven joints to the floor covering.