



## Recommended Turtleback Handling and Installation Procedures

### Storage and Handling

- Protect the panels from the elements with appropriate covering during storage, transit and installation.
- Store panels flat in a dry environment.
- Handle panels with care and in an upright position

### Sub-floor Preparation

- Ensure the sub –floor is dry, level securely fastened, structurally sound and free of all foreign matter and projections. Sand the joints of the subfloor if necessary.
- Remove all dust, dirt and debris from the subfloor.

### Crawl Space Requirements

- Suspended wood subfloors must have a minimum 18” clearance between ground level and floor joists. A vapor barrier ground cover (minimum 6mil.) completely covering the ground and affixed to the walls of the foundation is essential.

### Cutting TurtleBack

- For most cuts use the “score and snap method. Use a carbide-tipped blade or utility knife with a straight edge as a guide and snap panel away from the cut, then back.
- For more difficult cuts, combine “score and snap method with a handsaw or low RPM power saw. A circular saw with a carbide tip or an electrical Snapper Shear may be used.
- Cut out holes for plumbing using a hole saw, keyhole saw, or variable speed jigsaw. For small holes, score around perimeter and use a hammer from the face side to break out.

### Renovations

- Do not install over cushioned-back vinyl
- Existing floor must be limited to one layer of vinyl that is fully adhered and bonded to the substrate.
- Repair existing vinyl surface by filling missing or broken tiles, curling seams, severe gouges, or protrusions with a good quality cement based floor leveler.
- Remove all wax, grease, and debris with a solvent-free vinyl stripping agent.

### Installing Turtleback Panels for Resilient and other Floor Coverings.

- With the smooth side facing up set panels at right angles or perpendicular to the subfloor panels.

- Leave 1/4" expansion around perimeter at walls and any other vertical surfaces i.e.: cabinets, vanities, fixtures etc.
- Lightly butt factory edges to factory edges. Install panel's ashlar fashion fastening one sheet at a time, individually and completely before fastening next panel. Lay panels so that the cut edges are against the wall.
- Space all fasteners 2" O.C. around any edges of panels and 4" O.C. in the field of the panel. Ensure fasteners are flush or slightly below the panel's surface and visible. Apply your body weight where the fastener will enter the panel to ensure full contact with the panel and the subfloor.
- Offset joint 8" – 12" from the subfloor joints. Stagger the joints a minimum of 16" O.X. so that the four panel corners never meet.
- Fasten panels to the subfloor using galvanized chisel-point staples with a 1/4" (6mm) crown.

#### Finishing:

- Sand uneven panel joints until they are smooth, even and level. Avoid over sanding. Sanding must be done in a well-ventilated area with proper protection (see safety).
- Patch or fill all voids, depressions, damaged spots or gaps or seams in excess of 1/16".
- If patch is used, follow patch manufacturer's instructions and ensure the patch is completely dry.

#### Installing your new Floor Covering:

- Vacuum the panel's surface to ensure that it is free of any debris dirt or dust.
- Floor covering should be installed immediately after the installation of panels to avoid damage and environmental influences.
- Follow the Floor Covering and Adhesive Manufacturer's installation procedures, recommendations, guidelines, and limitations carefully before proceeding.

## Ceramic Tile & Stone Floor Application

### LAMINATION

- Laminate Turtleback to a minimum 5/8" thick T&G exterior grade plywood/OSB using Type 1 organic adhesive, polymer-modified thin-set mortar, or dry set mortar. Apply adhesive with a 5/32" V-notched trowel, mortar with 1/4" square-notched trowel. If gluing, apply the adhesive with a 1/8" notched trowel in a 6" wide strip around the perimeter ensuring adhesive does not seep through or fill panel joints. Spread adhesive throughout the balance of the panel.

### FASTENING

- Fasten panels immediately to the subfloor leaving a 1/8" – 3/16" space between panels at all joints and corners and 1/4" (6mm) at perimeter walls and other vertical surfaces.
- Fasten underlayment to the subfloor using hot-dipped galvanized roofing or ring-shanked underlayment nails, corrosive-resistant wood screws spaced every 6" -8" O.C.(15.2cm – 20.3cm) throughout panel field and around the perimeter of the panels with perimeter fasteners 1/2" from ends and edges, or with 1/4" crown chisel point staple spaced 4" o.c. in the field and 2" O.C. around the perimeter of the panel. Set the fasteners flush or slightly below the panel's surface. Do not overdrive.

### FINISHING UNDERLAYMENT JOINTS

- Sand all uneven joints. Fill all joints with a polymer-modified thin-set mortar and finish flush with the surface of the board. Joints must be reinforced with a 2" wide, high strength, alkali-resistant, fiberglass joint tape embedded in the mortar and leveled. Additional fill coats may be required.

### CERAMIC TILE INSTALLATION

- Note: Refer to ANSI A108.4 or A108.5 for complete tile installation instructions. Refer to mortar tile, and grout manufacturer's recommendations for proper tile sizes and types; mixing instructions; and set and cure times. Before setting the tile, fill all panel joints with the same mortar used to set the tiles. Wipe the surface of the Turtleback with a damp sponge just prior to adding mortar. Spread mortar with a notched trowel and set the tiles into place with a twisting motion (that meets the strength requirements of ANSI A137.1) Allow a minimum of 24 hours curing set time before grouting.

## FOR COUNTERTOPS

Install minimum 3/4" exterior-grade plywood or OSB and securely fasten to the cabinet. Maximum variations in the substrates surface should be no more than 1/8" in 10'. Position ends and edges over cabinet supports. Fasten panel to base with hot-dipped galvanized roofing or ring-shanked underlayment nails or corrosive-resistant screws, spaced 8" O.C. in both directions with perimeter fasteners 1/2" from ends and edges; or with 1/4" crown chisel point staple spaced 4" O.C. in the field of the panel and 2" O.C. around the perimeter. It is optional to laminate underlayment to the base using fasteners and mortar. Use latex Portland cement mortar applied with a 1/4" square-notch trowel if used.

## SAFETY

**AVOID BREATHING SILICA DUST.** This product when cut, drilled or sanded produces dust containing Free Silica which may be carcinogenic or delayed lung injury (Silicosis) if inhaled. Work outdoors, in well ventilated area, or use mechanical ventilation. Wear safety glasses and good quality dust mask. If in dusty areas or where airborne dust exceeds PEL wear NIOSH/MSHA approved respirator. This product contains one or more chemicals know to the State of California to be a carcinogen. See MSDS Sheet for detailed information.

## OTHER CONSIDERATIONS

Turtleback panels are not structural panels and will not resolve structural problems or deficiencies in the floor system; however they will contribute to a greater stiffness of the floor especially older floors. Installation of panels over unstable or irregular floors is not covered by the warranty. Do not install directly over concrete or plank flooring. An additional subfloor may have to be installed before the underlayment panels. Telegraphing is used to describe a mirror image that magnifies imperfections under the vinyl flooring or ridges and joints where the panels meet. This problem may exist almost entirely and only under resilient flooring. The thinner the flooring product the more susceptible telegraphing is. Telegraphing is commonly traced to moisture induction or penetration from below or above the panels and/or improper installation and movement of panels atop the subfloor. Proper installation is most important to guard against telegraphing that may affect the cosmetic appearance of the finished floor. Incorrect use of patching compound at the panel's joints is the leading cause of joint telegraphing.

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