WOODWORKS™ Ekos® Wall Systems

Installation Instructions

1. GENERAL

1.1 Product Description

WoodWorks Ekos Wall Systems consist of perforated or unperforated wood veneer wall panels that are available with a variety of system installation, chair rail and trim accessories. Ekos wall panels are attached to existing drywall or plaster walls by means of internal splines which are fastened to the base wall.

The Ekos panels are composite products made with real wood veneers and a mineral fiber substrate. They are available in one standard width and three standard heights. System accessories include solid wood, aluminum and plastic materials.

Ekos wall panels are not recommended for installation in high-impact or high-traffic areas.

1.2 Storage and Handling

The Ekos components shall be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons shall be stored in a flat, horizontal position. Proper care should be taken when handling to avoid damage and soiling. Do not store in unconditioned spaces with humidity greater than 55% or lower than 25% RH and temperatures lower than 50°F or greater than 86°F. Panels and accessories must not be exposed to extreme temperatures, for example, close to a heating source or near a window where there is direct sunlight.

1.3 Site Conditions

WoodWorks Ekos materials should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation. They should not, however, be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space.

1.4 Application Considerations

Ekos wall panels are designed to be installed with Ekos installation splines and accessories in a vertical or horizontal orientation. Stacking wall panels is not recommended. Ekos wall panels should not be used to support ancillary items typically hung on walls such as pictures, clocks, etc. Such items should be supported above the Ekos wall panels from solid wood trim above the panels, or through the panels to wall studs behind.

1.5 Temperature & Humidity During Installation

WoodWorks Ekos wall panels and solid wood accessories are interior finish products designed for installation in temperature conditions between 50°F and 86°F, in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity shall not fall below 25% or exceed 55%. There shall be proper ventilation of the plenum in high-moisture areas. All plastering, concrete, terrazzo or any other wet work should be completely dry.

All windows and doors should be in place. The heating, ventilating and air-conditioning system should be installed and operable where necessary to maintain proper temperature and humidity conditions before, during and after installation of the WoodWorks Ekos system.

1.6 Color

WoodWorks Ekos wall panels are available in four standard finishes. Solid wood accessories are also available in four standard finishes and aluminum trim accessories in two colors. Natural variations in color and grain are characteristic of wood veneer and solid wood products. To maximize visual consistency, order and install Ekos panels and trim at the same time as different veneer and wood production lots will vary in color and grain, and wood products may also tend to darken over time.

1.7 Tools and Cutting Recommendations

You'll need the following tools: Utility knife, laser or other level, straight edge, miter saw, cordless drill with screw bits, #6 x 1-1/4″ bugle head Hi-Low Screws, tape measure, wood glue, pneumatic nail gun and compressor and a spiral saw.

We do not recommend using a saber saw to cut the wood panels unless the cut edges will be hidden by some kind of trim, such as a receptacle cover or switch plate.

For panel cuts that will be seen, we recommend that a spiral saw be used. Please review the following recommendations for using this type of tool as well as cautions for when other tools may be used.

Spiral Saw (Roto-Zip) – A spiral saw can be used to make cutouts for receptacles and switches or it can be used to make straight cuts to alter the length of the panels. This tool can make plunge cuts as well as cuts in from the edge. The cut is made from the face side. The resulting edges are clean and neat. This cut produces less airborne dust than a circular saw.

Utility knife – This cut is not as easy as it is with bare mineral fiber board. The blade must be sharpened (use a sharpening stone instead of changing blades), and the veneer offers considerable resistance to the blade as it passes through the board. The resulting cut is relatively clean with little or no splintering at the cut.

Circular saw – A cordless circular saw makes a clean cut when the panel is cut from the back side. If the cut is made on the front side, there is too much splintering on the face due to the direction of the teeth on the blade. A considerable amount of dust is made with this cut.

⚠CAUTIONS

- Never cut one panel on top of another panel.
- Never install Ekos wall panels above the ceiling line. Although the panel looks like solid wood, it is not and would not accommodate secure application of wall molding for a ceiling.

⚠CAUTION! WOOD DUST. Sawing, sanding and machining wood products can produce dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

Precautionary Measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate NIOSH-designed dust mask. Avoid dust contact with eyes and skin.

First Aid Measure in case of irritation: Flush eyes or skin with water for at least 15 minutes.

⚠WARNING! MAN-MADE VITREOUS FIBERS. POSSIBLE CANCER AND RESPIRATORY TRACT HAZARDS. CAN CAUSE TEMPORARY RESPIRATORY, SKIN AND EYE IRRITATION.

Precautionary Measures: During the installation be certain that the work site is well ventilated and avoid breathing dust. If high dust levels are anticipated during installation, such as with the use of power tools, use appropriate NIOSH designated dust respirator. All power cutting tools must be equipped with dust collectors. Avoid contact with skin or eyes. Wear long-sleeved, loose fitting clothing, gloves and eye protection.

First Aid Measures: If contact occurs, flush eyes and skin irritation with plenty of water for at least 15 minutes and remove contaminated clothing. After installing material, wash with warm water and mild soap. Wash work clothes separately from other clothing. Rinse washer thoroughly.

2. INSTALLING EKOS WALLS

2.1. Determine Width of Border Panels

The width of the panels is 24″ with an optional 1/2″ reveal or trim strip between them. The same panels can also be installed with a 1/8″ reveal between panels using the wall bead spline.

If the installation of wall panels does not start and end against another wall, all of the panels will be full width.

If both ends of the installation are butted against other walls, it is unlikely that you will install all full width panels. The panels at each end should be equal and should be as large as possible.

2.1.1 To calculate the border panel widths with a 1/2″ reveal between panels, first divide the wall dimension by 24.5″. Take the remainder, add 24.5″, and divide in half. This is the dimension from the starting wall to the edge of the first border panel.

EXAMPLE: The room measures 27′ 4″. Change this to a decimal equivalent in inches (324.33). Divide by 24.5 to get 13.24 panels. That is 13 panels and 0.24 of another panel. 0.24 of another panel equals 5.88″. Add 24.5″ (the panel module size) to 5.88″ and get 30.38″. Divide that in half and get 15.19″. Change back to fractions and get 15-3/16″. This is the width of the first border panel.

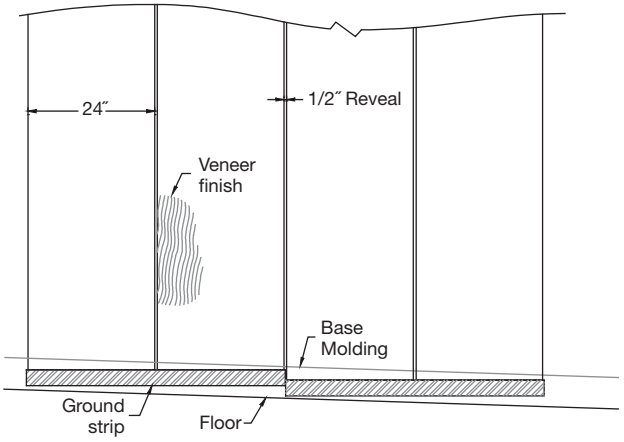
To calculate border widths with a 1/8″ reveal between panels using the WALL BEAD SPLINE, first divide the room dimension by 2′, then take the remainder, add 2′, and divide in half.

You may need to calculate the border panels first if the floor is not very level.

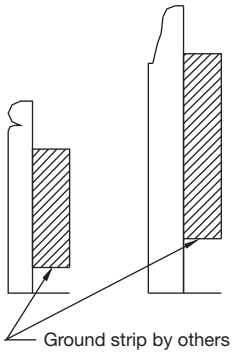
2.2 Establish a Level Line

Establish a level line along the wall near the floor as a base for the wall panels. This line should be 1/2″ lower than the finished height (either 4″ or 6″) of the base molding you are using.

NOTE: Make sure the level line is no higher from the floor than the height of the base molding. If the floor is extremely out of level, you may have to strike more than one level line to accommodate the floor slope. This would result in a “stepped” level line. If the level line is “stepped,” the step must occur between panels (see example below).



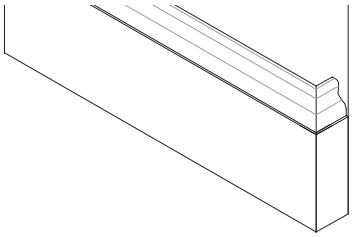
2.2.1 Install 3/4″ thick lumber (by others), aligning the top of the lumber with the level line. The width of this lumber needs to be between 2″– 4″, depending on slope conditions and base molding height. Secure the lumber to wall studs with appropriate fasteners. You will use this lumber as a “ground strip.” The bottom edge of the wall panels will rest on this lumber. It is important that they are installed level, so the panels are plumb when they are sitting in place.



2.2.2 Trim the ends of the base molding as necessary and fasten the base molding to the “ground strip” already installed on the wall.

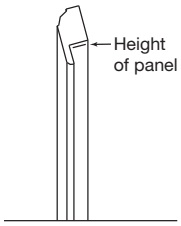
The bottom edge of the base molding will rest against the floor surface and cover the “ground strip.” Use an appropriate fastener. A pneumatic nail gun works well for this.

2.2.3 If the base molding does not reach from wall to wall, miter a “return” on the base molding where it ends.



Fasten the quarter round molding to the base molding at the floor to close off any openings due to the unevenness of the floor.

2.3 Panel Installation

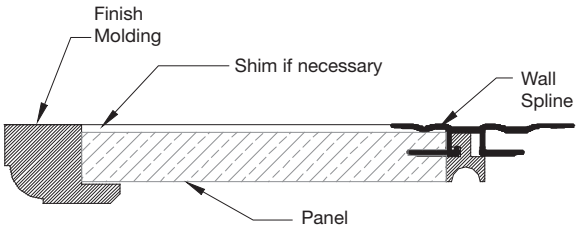


Finish molding is used at each side and at the top of all installations to cover raw edges of the panels. Install finish molding vertically at one end of the installation. The bottom end of the finish molding will rest on the top of the base molding with a straight cut. Miter the top end of the finish molding so that the rabbet in the back of the molding is 1/8″ higher than the panel if the panel does not go to the existing ceiling.

2.3.1 If the panels are to reach the existing ceiling, cut the long point of the miter to the existing ceiling height and cut the panel 1-1/8″ short of the existing ceiling height.

2.3.2 If the installation is not wall to wall, install the finish molding plumb. If the installation is wall to wall, install the molding against the abutting wall.

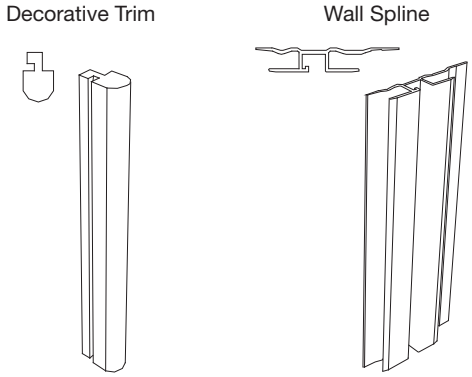
2.3.3 Measure out from the abutting wall, or the starting point, the calculated border dimension. Strike a plumb line on the wall where the edge of the first panel will fall. Measure from the rabbet in the finish molding to the plumb line several places and mark the panel where you will cut it. Cut to width using these marks as a guide. Measure the desired height of the panel and cut the panel to this measurement.

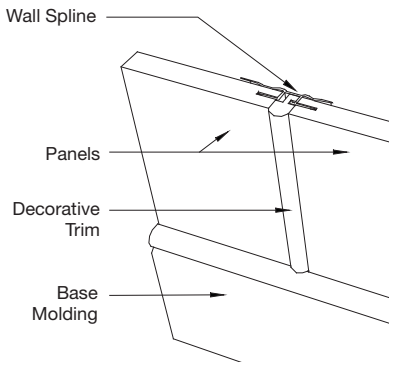


2.3.4 Place the bottom edge of the panel on the ground strip and slide the panel sideways into the rabbet in the finish molding. If the face of the panel does not fill the rabbet in the finish molding, fasten shims behind the cut edge of the panel so it fits more snugly.

You may have to do the same for the top and bottom edges. The rabbet in the finish molding and the pocket in the base molding are sized to include the thickness of a panel when splines are inserted between panels.

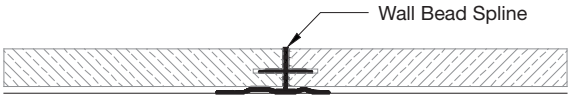
2.3.5 Fit a decorative accent trim into a wall installation spline (the spline does not have to extend the full length of the panel) and slide the spline into the kerfed edge of the first panel. If the decorative trim protrudes from the face of the panel, you must cut the trim so it rests on the base molding at the bottom and stops 3/8″ short of the top of the panel.





If the trim does not protrude from the face of the panel, cut the trim so it rests on the ground strip at the bottom and extends to the top of the panel.

2.3.6 If you are using the Wall Bead Spline and no accent trims, cut the beaded spline so it rests on the ground strip and extends to the top of the panel.



Fasten either wall spline to the wall using appropriate fasteners for the composition of the wall.

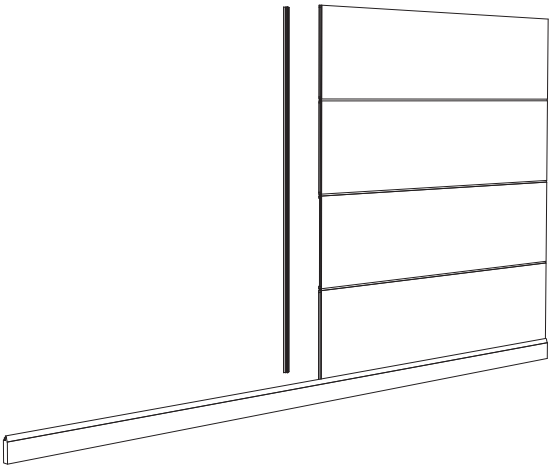
2.3.7 Cut the next panel to height, fit a decorative trim into the spline, slide the spline into the kerf in the panel and fasten the spline to the wall as before.

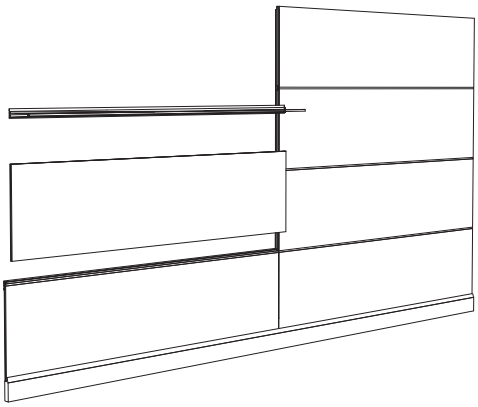
2.3.8 Continue in this manner until you reach the other end of the wall you are installing. If the installation is wall to wall, cut the last panel short of the abutting wall allowing space (about 1-1/8″) for the finish molding to be installed at the end after the panel is installed. If you are not butting against another wall at the end, install the last full width panel and then install the finish molding vertically against the edge of the last panel.

2.3.9 Cut and fit finish molding horizontally across the top of the panels to meet the vertical finish moldings at the sides of the installation.

2.3.10 Horizontal Ekos Installation

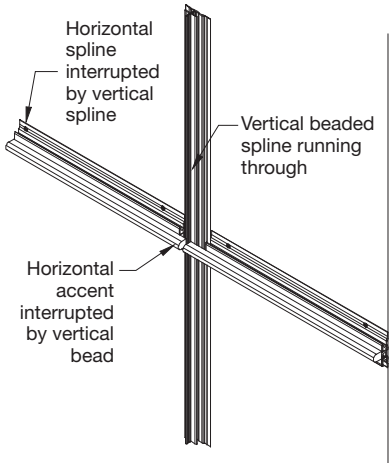
Ekos panels can be mounted horizontally if you specify panels with four kerfed edges. Horizontal splines between panels will support the weight of individual panels. Fasten them to wall studs with appropriate fasteners.

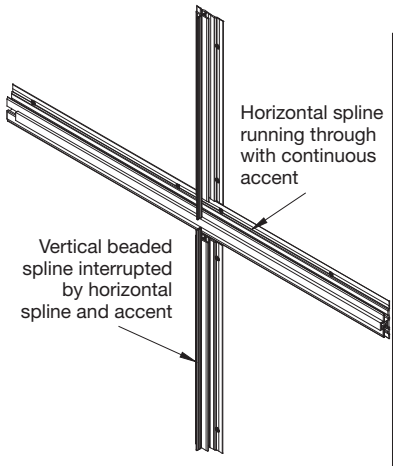




Vertical splines can be secured to the wall using appropriate fasteners. The vertical splines capture the vertical edges of the panels. The horizontal and vertical splines must meet at a 90-degree angle.

Below are some examples of details where the horizontal and vertical splines meet. You may use other combinations of splines and accents.





The installation of the ground strip, baseboard and finish molding is done the same as with vertically mounted panels. Remember to cut horizontal accent trims that protrude from the face of the panels 3/8″ short of the end of horizontal panels. This will accommodate the fit of the finish molding installed vertically at the end of the installation.

The examples above show combinations of beaded splines and standard splines with wood or aluminum accent trims. We suggest using beaded splines for every installation where the panels will be mounted horizontally. The beaded spines can be in either the vertical or horizontal orientation.

It is difficult to achieve satisfactory visuals using protruding wood trims in both orientations at the same time. The accent trims that do not protrude from the face of the panel can be used both vertically and horizontally at the same time. They will simply butt when they meet at the intersections.

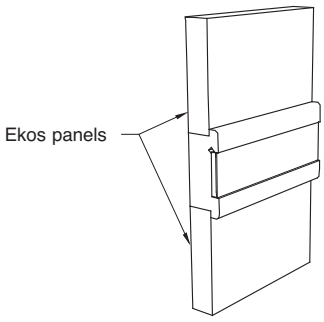
Be aware that horizontal installations may compromise the layout when using the chair rail components. Most chair rails are installed 30″ or 36″ from the floor. Consider the horizontal seams between panels and the proximity of the chair rail when planning the layout of horizontal panels to achieve the best visual.

2.4 Installing Chair Rail Accessories

2.4.1 Chair Rail with Insert

Mark a level line on the wall at the desired height of the chair rail.

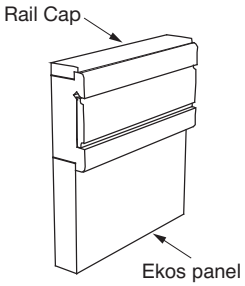
Wall panels fit above and/or below the chair rail and rest in the channel on the top and/or bottom side of the Mounting Rail (see illustration).



Predrill and countersink holes for flat head screws in the insert channel of the Mounting Rail.

Align rail with the level line and fasten the rail to each wall stud. Use flat head screws appropriate for the wall construction. Install your choice of Rail Insert in the channel using carpenter's glue and brads.

NOTE: The Rail Insert with the aluminum face is secured to the rail with double faced tape (by others). The aluminum Rail Insert has a protective film on the face that should be removed before securing to the rail.



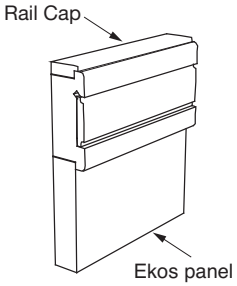
If wall panels are to be installed below the chair rail and not above the chair rail, you install a Rail Cap above the chair rail using carpenter's glue and brads. One Rail Cap is used with Ekos (see illustration).

2.4.2 Chair Rail with Easel Ledge

Mark a level line on the wall at the desired height of the chair rail.

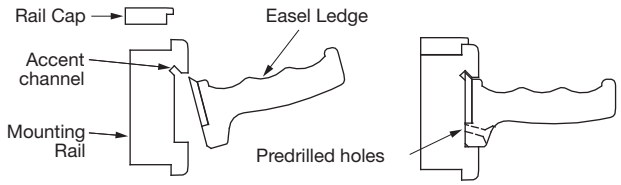
Predrill and countersink holes for flat head screws in the insert channel of the Mounting Rail.

Align rail with the level line and fasten the rail to each wall stud. Use flat head screws appropriate for the wall construction.



If wall panels are to be installed below the chair rail and not above the chair rail, you install a Rail Cap above the chair rail using carpenter's glue and brads. One Rail Cap is used with Ekos (see illustration).

Insert the Easel Ledge into the accent channel in the Mounting Rail and secure it in place with screws through the predrilled and countersunk holes as shown (see illustration).



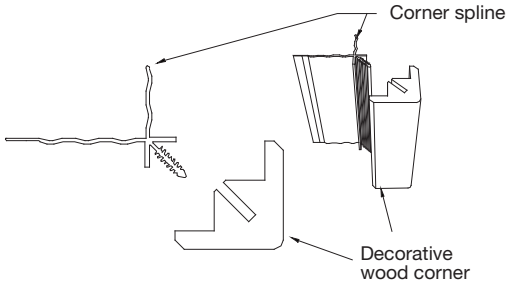
NOTE: The Easel Ledge installation into the Mounting Rail is the same whether or not partial wall installation with Rail Caps is used.

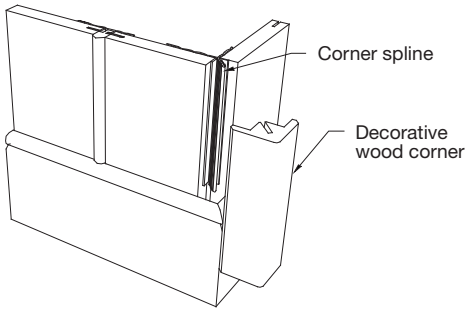
2.5 Cutouts for Switches and Receptacles

Carefully locate the edges of the desired cutouts on the face of the panel. Cut away the material to allow access to the switch or receptacle. A qualified electrician may have to install a box extension for the switch or receptacle before the panel is installed. Mount the panel on the wall and secure with a spline. Have the electrician remount the switch or receptacle. **NOTE**: Any cut panel edges should be sealed or covered with an appropriate trim or molding.

2.6 Outside Corners

Outside corners are handled by installing a corner spline on the corner of the wall. You then drive a decorative wood corner onto the spline after the panels are in place.





2.7 Inside Corners

When panels meet at an inside corner, you should scribe fit one of the panels to butt against the other panel. Use a construction adhesive (follow the adhesive manufacturer's recommendations for application) to secure the panels to the wall where you have no splines or other means of securing the panel.

If scribe fitting the inside corner does not give you the desired visual, fasten the quarter round molding to the panels at the inside corner to close off any openings.

3. MAINTAINING EKOS WALLS

3.1 Ongoing Site Conditions

The interior environment in which Ekos panels and accessories are installed must be MAINTAINED at a relative humidity level ABOVE 25% RH. The temperature must also be maintained between 50°F and 86°F at all times.

3.2 Cleaning

A clean, damp soft cloth lightly applied is the recommended cleaning method for Ekos wall panels.

Traditional furniture wipes or non-aerosol polish lightly applied may also be effective. However, no solvent-based cleaners of any type should ever be used. Soap-based products may also leave unsightly residue.

Do not use aerosol sprays of any type on any perforated

panels. Also, be careful not to saturate or soak a perforated or unperforated panel with any substance (liquid, polish or cleaner).

3.3 Touch-up Kit Instructions

3.3.1 Description

The filler stick(s) and marker in the kit provided with each Ekos panel order are intended for use with Armstrong WoodWorks Ekos wall panels and accessory items.

The touch-up kits for the Ekos Light Cherry and Ekos Maple finishes have two filler sticks per kit. These are for lighter and darker areas of the wall panels in those finishes. The touch-up kits for the Ekos Dark Cherry and Ekos Mahogany finishes have only one filler stick per kit.

Each filler stick and marker has instructions and cautions printed on the product. Follow all instructions printed on the product.

For additional suggestions for use, review sections 3.3.2 and 3.3.3.

3.3.2 Using the Filler Stick

The filler stick can be used to touch up small nicks, chips or scratches on the Ekos products, including nail finishing holes. First, fill in the damaged area with the appropriate filler stick. Remove excess material around the repair area carefully using a clean dry cloth or a straight-edge scraper tool, such as the edge of a putty knife or credit card. Be careful not to remove the filler material from the repaired area.

3.3.3 Using the Marker

The touch-up markers can be used to cover slight surface scratches, nicks or cut edges. They may also be useful to cover exposed or cut areas of Ekos solid wood accessories. First, shake the marker pen to mix the contents. Then, depress repeatedly the white area of the tip against a hard surface to start the flow of marker fluid. Do not flood the felt tip. When marker is ready, apply to the product area. Wipe excess off quickly before it dries using a clean (dry or damp) cloth (not included in kit). In some cases, several applications may be necessary to achieved desired results. Allow marker stain to dry thoroughly.

3.3.4. CAUTION

Keep all touch-up products out of reach of children.

MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 276 7876.

For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLine™ services at 1 877 276 7876 or FAX 1 800 572 TECH.

For the latest product selection and specification data, visit armstrongceilings.com/ekos.

U.S. Patents Pending.

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