

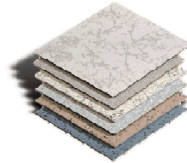


CRES-X FLOOR COVERING INSTALLATION INSTRUCTIONS

INTRODUCTION

CRES-X PS2-92 certified single layer subflooring (combination subfloor and underlayment) may be covered with virtually any decorative finish floor covering in use today including: *carpeting, linoleum, sheet vinyl, composition vinyl tile, rubber, cork, solid hardwood strip, engineered hardwood plank or parquet, engineered hardwood longstrip, bamboo, laminate, ceramic tile or natural rock or stone such as granite, marble, limestone or slate.* The following information provides general and specific requirements and instructions regarding the installation of various floor coverings.

Floor coverings installed over CRES-X must be installed according to these instructions and requirements.





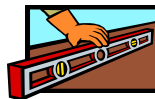
GENERAL INSTALLATION REQUIREMENTS

The following requirements apply to all floor coverings applied to CRES-X. Installing floor coverings outside the guidelines recommended by Hambro may void the warranty.



WOOD IS HYGROSCOPIC

Prior to the installation of any decorative finish floor covering, the interior temperature of the building must be maintained at 65 to 80 degree Fahrenheit for a minimum of 20 days. The purpose of this requirement is to allow an adequate period of time for all of the wood building products used to construct the floor system to adjust to the ambient level of humidity under what is anticipated to be “normal” living conditions. The expansion and contraction of all the wood products in a floor system due to humidity related moisture equalization can contribute to problems with floor coverings. Because wood is hygroscopic by nature, all wood building products, solid or engineered will be expanding or contracting to adjust to the changing and prevailing humidity conditions. Providing a 20 day equalization period under anticipated living conditions aids greatly in stabilizing the floor system and minimizing the possibility of a major change in moisture content that could occur following the completion of construction. During the 20 day acclimatization period time, all doors and windows should be kept closed.



LEVEL THE FLOOR

Prior to the installation of any underlayment or finish floor covering check the floor for level. The floor must be level across the entire area to be covered. Should the floor system be determined to be out of level the floor must be adjusted to level prior to installing any underlayment, tile backerboard or floor covering. In some cases it may be necessary to contact your builder or a qualified professional to make any leveling adjustments.



SURFACE REPAIRS

Repair or patch any damage or defects in the surface of the floor including broken panels, gouges, dents or holes. Severely damaged or broken panels should be replaced. The repair of gouges, dents or holes should be performed using an approved hard floor patching compound or filler. The material should be applied in strict accordance with the manufactures instructions. All holes, voids, cracks or gaps greater than 1/16" in width or diameter must be filled and sanded smooth. *Note: Do not fill the gap between the panel edges. Panel seams must remain open and should not be filled.*

SAND SEAMS

All seams or joints in the area of the floor to be covered must be smooth and level. Use 80 or 100 grit sandpaper to feather out all uneven seams and joints a minimum of 8" on each side.

COUNTERSINK FASTENERS

The heads of fasteners should not protrude above the surface of the CRES-X subflooring or underlayment, fasteners should be set to a depth of 1/32" to 1/16" below the surface of CRES-X, underlayment, or tile backerboard. Inspect the entire floor area to be covered and reset fasteners as required.

CLEAN THE FLOOR

After all leveling, repairs, patching and sanding of the floor has been completed thoroughly clean the floor by first sweeping and then vacuuming the entire area to be covered. Take special care to make certain all debris, dirt and dust is removed. Also make certain there are no areas contaminated by oil or chemicals. Should areas be found contaminated by oil or chemicals make certain they are removed and cleaned prior to installing the floor covering, tile backerboard or underlayment.

DRY THE FLOOR

Prior to installing the finish floor covering, inspect the area to be covered to make certain it is dry and free of liquid moisture or wet areas. Any wet are should be thoroughly dried prior to the installation of the floor covering, tile backerboard or underlayment.

FASTENERS AND JOISTS

Solid or engineered wood, bamboo or laminate flooring products should not be thinner than 1/4". When fasteners are used to install solid or engineered hardwood or bamboo, staples rather than nails must be used. **When tile is installed over CRES-X covered with tile backerboard, joist spacing must not exceed 16" OC.** Contact Hambro Forest Products, Inc., for recommended installation instructions regarding various finish floor covering materials including; carpeting, linoleum, sheet vinyl, composition vinyl tile, rubber, cork, solid hardwood strip, engineered hardwood plank or parquet, engineered hardwood longstrip, bamboo, laminate, ceramic tile or natural rock or stone



PRODUCT SPECIFIC INSTALLATION REQUIREMENTS

In addition to the general installation instructions listed above, the following floor covering specific installation requirements must be performed.

CARPETING

Carpet and carpet padding can be applied directly to CRES-X.

CERAMIC TILE, MARBLE, GRANITE, LIMESTONE OR SLATE

Follow the general installation instructions listed above and the additional requirements listed below. Installing floor coverings outside the guidelines recommended by Hambro may void the warranty.

- Although CRES-X is performance rated for installation on joists spaced up to 24", **16" O.C. is the maximum allowable joist spacing when installing ceramic tile, marble, granite, limestone or slate or other natural or manmade or natural clay, stone or rock floor covering.** Joist spacing of 16" O.C. meets the maximum allowable spacing recommended by tile manufacturers, The World Floor Covering Association and The Tile Council of America and the Engineered Wood Association. If joist spacing exceeds 16" O.C. underlayment of at least 3/4" must be glued and nailed to the floor before the floor covering is installed.
- A tile backerboard such as Duroc, Hardibacker or an equivalent must be installed over CRES-X prior to the installation of ceramic tile or natural rock or stone like granite, marble, limestone or slate.
- The grout line must not be less than 1/8" and not greater than 1/2".
- Custom Building Products Flexbond Premium Flexible Bonding Mortar is the recommended tile setting mortar. As an alternative, Custom Building Products Premium Plus Thin Set Mortar mixed with Custom Building Products Acrylic Admix can also be used.
- Apply the mortar using a trowel with 1/4" wide x 3/8" deep square notches.
- Set each tile by pushing it firmly into the mortar bed and twisting it in a circular back-and-forth motion (clockwise then counterclockwise) several times. Make sure to continue pressing the tile into the mortar bed while slightly twisting it back and forth. Complete the setting of each tile by firmly tapping them into the bed of mortar with a rubber mallet. The entire surface area of each tile should be struck with the mallet to assure it is securely set. Avoid striking the tile with a force that will fracture, crack or break the tile.
- After the mortar has properly cured and set use only Custom Building Products Polyblend Sanded Grout to complete the installation.



- All other installation instructions required by Custom Building Products for each of their tile installation products being used must be followed with the exception of those listed above. Contact Hambro at 800-442-6276 should you encounter any discrepancy.
- Installing floor coverings outside the guidelines recommended by Hambro may void the warrantee.

RESILIENT MATERIALS

Resilient decorative finish flooring such as linoleum, sheet vinyl, composition vinyl tile, rubber tile, sheet rubber and cork can be installed directly over CRES-X. Resilient materials should not be thinner than 1/16". Follow the general installation requirements listed above and the specific requirements of the finish floor covering manufacturer. Should an installation procedure discrepancy exist between the installation instructions of the floor covering manufacturer and the Hambro installation instructions, immediately contact Hambro at 800-442-6276 to obtain clarification and approval. To protect the CRES-X product warranty, in circumstances where installation recommendations between the floor covering manufacturer and Hambro conflict, Hambro must be contacted and written approval obtained before the floor covering is installed. Installing floor coverings outside the guidelines recommended by Hambro may void the warranty.

WOOD, BAMBOO OR LAMINATE MATERIALS

Solid wood strip, engineered wood plank, engineered longstrip, bamboo or laminate flooring can be installed directly over CRES-X. Fastening, gluing or floating installation procedures are acceptable and the floor covering manufactures recommendations must be followed. When fasteners are recommended by the manufacturer, staples of 1 1/2" – 2" must be used. Do not use flooring nails or cleats to install wood materials on CRES-X even when they are recommended by the floor covering manufacturer. Follow the general installation instructions listed above and the specific requirements of the floor covering manufacturer. Should an installation procedure discrepancy exist between the installation instructions of the floor covering manufacturer and the Hambro installation instructions immediately contact Hambro at 800-442-6276 to obtain clarification and approval. To protect the CRES-X product warranty, in circumstances where installation recommendations between the floor covering manufacturer and Hambro conflict, Hambro must be contacted and written approval obtained before the floor covering is installed. Installing floor coverings outside the guidelines recommended by Hambro may void the warranty.



5 YEAR LIMITED WARRANTY

Provided the procedures and requirements outlined above are followed, Hambro Forest Products, Inc., (Hambro) will warranty the installation of floor coverings for a period of 5 years following date of installation. Should a problem develop and the CRES-X be determined to be the cause, the total cost of labor and materials to complete a repair or replacement will be prorated based on a 5 year service life for any floor involved.

Hambro reserves the right to inspect any complaint or claim related to the installation of CRES-X that may require repair or replacement to evaluate the complaint, to determine the probable cause of the problem and to approve or decline any replacement or repairs prior to any work being performed. Should repair or replacement be determined to be required, Hambro reserves the right, at its sole discretion, to implement one of the following solutions. A.) Issue a payment to the homeowner to cover the estimated cost of labor and materials to cover the repair or replacement. B.) Arrange for the repair of the problem including materials and labor. C.) Remove and replace the materials involved.

In addition, when reasonable and practical, all replacement and/or repair will be with OEM materials unless the OEM materials have become unavailable, difficult to obtain and/or have become unreasonably expensive. All labor and materials required to complete any repair or replacement will be prorated based on a 5 year useful life.



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