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Flooring Underlayment Guide

The proper selection of flooring underlayment is important when installing a floating floor; either laminate or engineered real wood. Floating floors utilize a method called “free float” where they are not actually attached to the sub-floor. Instead, the flooring boards are attached to each other by either gluing or locking tongue-and-groove boards together. The boards then lay on top of the underlayment which has been placed on top of the sub-floor.

By adding underlayment between the flooring and the sub-floor, you can accomplish three things:

- Slightly soften the feel when you walk on the floor;
- Help deaden sound when you walk on the floor;
- Minimize any slight imperfections on the sub-floor surface.

Underlayment does not function in the same manner as padding under carpet. Thicker underlayment will not provide more cushioning. Beware of salesmen who might attempt to sell thicker underlayment the same way they sell thicker carpet padding.

There are a variety of different types of underlayment available on the market. You must select the type that is recommended and/or approved by the manufacturer of the specific flooring you intend to install. There are four basic types of underlayments offered for installation over your sub-floor:

- **Standard Foam Underlayment** is typically 1/8” thick and does not have an attached moisture barrier.
- **Combination Underlayment** is identical to the standard foam, with the addition of a moisture barrier attached to one side. This will be the side in contact with the sub-floor.
- **Upgraded or Modified Underlayments** come in various densities and thicknesses and are made of high-density rubber or foam.
- **Solid Cork Underlayment** is typically only used when maximum sound reduction is required.

Standard Foam Underlayment:

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This is the most commonly used underlayment. Each manufacturer will have a different name for its product, but they essentially are all the same. This type of underlayment is a thin foam padding and comes in rolls which typically range from 100 to 1300 square feet. Along with the name and the size of the roll, the price will vary between manufacturers. This underlayment will offer more-than-adequate comfort and sound reduction.

The Standard Foam Underlayment will not have an attached moisture barrier and should only be used where there is no possibility of moisture seeping upward from beneath the sub-floor. This underlayment is good for use over a plywood sub-floor or over a concrete floor where moisture is not a problem. It may also be a good choice for use over sub-flooring on the second floor or higher. The Standard Foam Underlayment is not a good selection though if your plywood sub-floor is over a crawl space, unless you also install a layer of 6 millimeter plastic over the plywood.

Combination Underlayment:

This underlayment is also called Combination Foam/Film or simply “Combo” underlayment. It is essentially the Standard Foam Underlayment with a moisture barrier attached to one side. The moisture barrier will prevent any moisture from seeping up through the sub-floor and into the top flooring material where it could cause significant damage.

As with the Standard Foam material, Combo underlayment will have different names, roll sizes and prices depending on the manufacturer, although they actually will have little variation in the thickness or quality. This type of underlayment will provide nearly identical comfort and sound-reduction as the material without the moisture barrier.

The Combo underlayment should be used wherever there is a possibility of moisture coming from the sub-floor. Typically this would be on a concrete slab or a plywood sub-floor on a ground floor or basement. This is a good underlayment to choose if the sub-floor is over a crawl space of any type or size, and is a good selection in areas where high humidity is a problem.

Upgraded or Modified Underlayments:

These underlayments tend to be denser and/or thicker than the Standard Foam or Combo Underlayments. They may be made of closed-cell foam, or other particularly dense foam substances, rubber, or fiber, and their main function is to provide a higher level of sound reduction. They will help deaden the sound, but they will not increase comfort.

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It is important to note that the **Upgraded** or **Modified Underlayments** will not substantially reduce the sound as you walk on the flooring; their primary function is to reduce sound that would travel to the area below. Therefore this type of underlayment is commonly used on second floor locations or within condominium complexes to limit the sound traveling to the floor below.

As with the types of underlayments discussed above, Upgraded or Modified Underlayments will have different names depending on the manufacturer. Additionally, they will vary in overall quality, thickness, construction, materials, and sound reduction ability. Some of these underlayments will be available with a moisture barrier, while others will not. Again, it is important to remember that these underlayments will not provide increased comfort in the same manner as thicker or denser carpet padding.

Solid Cork Underlayment:

As the name implies, this underlayment is made of cork. The thickness will vary by manufacturer, but most commonly will be 1/4" thick.

Solid Cork Underlayment provides a very high level of sound reduction and is only used when this level of sound deadening is required. This underlayment is generally much higher in cost than the other types previously discussed, and must be glued directly to the sub-floor and flattened with a weighted roller.

Solid Cork Underlayment will not increase the comfort of the floor, but will substantially reduce the sound that travels to the area below. Cork underlayment is often used in condominium buildings and may be specifically required whenever installing a laminate or wood floor. Cork can also be used as an underlayment for a ceramic tile floor.

The selection of the proper underlayment type is important, but the proper installation of your sub-floor is even more essential to the beauty and durability of the finished floor. The sub-floor consists of a layer of concrete, or a layer of planks or plywood installed directly to the floor joists. Regardless of how much care is taken during the initial installation, the building will settle and the sub-floor will dry out. This will cause the wood to shrink slightly and possibly warp, allowing the wood to slide around the nails attaching the sub-floor to the joists. This, along with the boards themselves rubbing against each other, can produce creaks and squeaks.

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There are after-the-fact solutions for eliminating these annoying noises, such as adding bridge joists, glue, shims, or more nails or screws. Prevention is the best way though to avoid these problems and can easily be accomplished during the initial installation of the sub-floor.

The type of fastener used will greatly reduce the possibility of squeaky floors. For instance, the new SubLoc® SCRAIL® collated fasteners from The BECK Fastener Group® are designed specifically for squeak-free sub-floor applications.

SubLoc® SCRAIL® is a performance-driven crossover between a screw and a nail. This fastener features a special adhesive coating and fine threads along the shank which dramatically enhance holding power when compared to ring shank nails, holding tight to reduce or eliminate squeaks. Additionally, the use of SubLoc® SCRAIL® fasteners enhances installation speed since they are collated and can be installed with most common nail guns.

The innovative SubLoc® SCRAIL® collated sub-floor fastener is just one of many versatile SCRAIL® fasteners offered. The extensiveness of the SCRAIL® fastener lineup helps make a vast range of construction projects easier and more productive since they can be used almost anywhere ordinary screws are used. They save time and labor costs, are easily adjusted, and quickly removed. Their holding power is dramatically stronger than that of nails and, when applied with a pneumatic nailer, SCRAIL® collated fasteners can be driven at a rate *eight times faster* than bulk screws and *twice as fast* as collated screws.

The diverse line of SCRAIL® collated fasteners meets construction demands for decking, siding, crating, fencing, millwork, light gauge steel construction, and of course the SubLoc® variety for installing squeak-less subflooring. Included in the SCRAIL® collated fasteners line are the following specialty items:

- BeckDeck® fasteners - featuring a double thread design that dramatically reduces the unsightly mound of material around a fastener head that is referred to as “volcanoeing” or “mushrooming” in composite deck materials.
- InvisiDeck® Hidden Deck Fastening System - a hidden fastening system for grooved and non-grooved applications.
- Mini-Scrail® fasteners - perfect for furniture manufacturing applications.

SCRAIL® and SubLoc® SCRAIL® sub-floor fasteners are distributed by [Fasco America, Inc.](#), the American distribution arm for The BECK Fastener Group® products. The BECK Fastener Group®

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has been in business for more than 100 years and they continue to focus on innovative thinking and consistent quality dedicated to satisfying each customer's unique needs.

To learn more about SubLoc® SCRAIL® and the other fasteners available through Fasco America, Inc. and the BECK Fastener Group®, [contact](#) our main office or the regional manager serving your area. Additional information is also available on the SCRAIL® [Facebook Page](#) and videos are available on [YouTube](#).

Fasco America

105 Industrial Park

P. O. Box 2389

Muscle Shoals, Alabama 35662

Phone Toll Free 800-239-TOOL (8665) or fax 256-381-6659

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