



Sub-Floors: The Secret to Creating Squeak-less Floors That Last

Squeaky floors in a house create great sound effects for a spooky movie or provide a nice early-warning system to alert you to intruders, but they aren't good for anything else. Squeaky sub-floors are just plain annoying, and can develop regardless of whether the flooring was installed according to code.

Sub-floors are a system consisting of floor joists supporting basic subflooring material, to which the interior finished flooring such as hardwood, carpet or tile are attached. The joists and subfloor are commonly attached using nails.

After a new house has settled and the flooring lumber has had time to dry out, it tends to shrink. As the flooring shrinks, it pulls away from the nails and the other flooring sections. When you walk across this dried-out material, the nails loosen even more, causing boards to rub against each other or slide against the nails. This motion causes creaks, chirps, and squeaks.

It is possible to silence this annoyance by solidifying the connections, eliminating this movement. This can be done in a number of ways:

- adding glued shims to fill any gaps (although this can backfire if the shim is too thick, making the problem worse)
- using adhesive construction glue (for minor voids)
- adding additional nails to the underside of the floor (although these can also eventually loosen),
or
- sister an adhesive-coated 2" x 4" or 2" x 6" to the loose joists or floorboards, tightening them with screws to establish a new, more solid connection.

Post-construction, this can involve costly repairs including a trip into a dark and damp crawl space while a co-worker walks across the floor above looking for the source of the squeak. Great care must be taken to ensure any fasteners driven from below don't pierce through expensive hardwood, loosen tiles, or create sharp hazard points through carpet.

From the top side, another way to silence the squeaks is to secure the area with finishing nails, or insert special break-off screws from above into the joists below. This is most easily accomplished with a hardwood flooring surface, but with care can be done through carpeting as well.

A better solution is to prevent the source of squeaks up front, during initial construction.

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Creating a squeak-less floor will depend primarily upon the type and amount of construction fasteners that are used. Fasteners should be centered on floor joists every 12" and centered every 6" along edges that lie parallel to floor joists.

Some contractors prefer screws when installing sub-floors; others opt for nails and pneumatic nail guns for quicker installation.

On one hand, nails and nail guns are faster, saving both time and money. On the other hand, screws are stronger, with their threaded shank securing a solid connection between flooring materials and preventing the fasteners from popping out. They are also adjustable, making it easier to fix any sub-floor squeaks that may occur post-construction once the materials dry and settle.

So which one is best for both the contractor and the homeowner - nails or screws? We recommend a hybrid of both, known as a nail screw fastener. This combines the advantages that each has to offer; enhancing installation speed while delivering added strength and flexibility.

Hybrids can eliminate most squeaks, because they accomplish two things:

1. Create a solid bond between the flooring and joists, and
2. Allow for simple adjustments if a noise should develop.

We recommend SubLoc[®] SCRAIL[®] nail screw fasteners, designed **specifically** for sub-floor applications with a special adhesive coating developed to eliminate squeaks in subfloor applications. This adhesive also dramatically improves the holding power of SubLoc[®] SCRAIL[®] fasteners when compared to ring shank nails. Fine threads along the shank make adjustment or removal easy, should it every become necessary. And they have the speed advantage builders require since they are collated, and designed for use in most common pneumatic nailers.

SubLoc[®] SCRAIL[®] Technical Data:

- *Material:*
 - Standard Steel
- *Finish:*
 - Electro-galvanized finish for interior applications and moderate exterior corrosion protection.
 - FasCoat™ finish is available by request for exterior applications under all but extreme salinity and humidity conditions. Tests conducted by accredited labs in the U.S. and Europe demonstrated the ability of FasCoat™ to withstand more than 2,000 hours before the first signs of red rust.



- *Diameter:*
 - .113"/.120"
- *Length:*
 - 2 ¼"
- *Collation:*
 - 20° Plastic Strip SCRAIL[®]
 - 33° Plastic Strip SCRAIL[®]
 - 15° Wire Coil SCRAIL[®]
- *Drive:*
 - Versa drive: combination of a #2 Phillips and a #2 Square head

The innovative SubLoc[®] SCRAIL[®] collated sub-floor fastener is just one of many versatile SCRAIL[®] fasteners available.

The breadth of the SCRAIL[®] fastener lineup makes an entire range of construction projects easier with their versatility, and can be used almost anywhere ordinary screws are used. They save time and labor costs, are easily adjusted and quickly removed, and their holding power is dramatically stronger than that of nails. When applied with a pneumatic nailer, SCRAIL[®] collated fasteners can be driven at a rate *twice as fast* as collated screws and *eight times faster* than bulk screws.

The extensive 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, and includes the following additional specialty items:

- InvisiDeck[®] - a hidden fastening system for grooved and non-grooved applications.
- Mini-Scrail[®] fasteners - perfect for furniture manufacturing applications.
- 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."

SCRAIL[®] and SubLoc[®] SCRAIL[®] sub-floor fasteners are distributed by Fasco America, Inc., the American distribution arm for BECK Group products. The BECK Fastener Group[®] has been in business for more than 100 years and continues their tradition of focusing on consistent quality and innovative thinking to satisfy each customer's unique needs.

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Fasco America is located in Muscle Shoals, Alabama, and employs an experienced staff of regional sales managers located throughout North America. Fasco America is proud to be active members of the ISANTA and NADRA trade associations.

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](#).

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