

The Ultimate Guide to: **MASS LOADED VINYL**

Everything you need to know about MLV including what it is, costly mistakes to avoid, and how to install it correctly.



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SECTION 1: WHAT IS MLV?



Mass Loaded Vinyl, also known as MLV, is a superior noise-blocking, non-toxic alternative to many other lead-based soundproofing materials. It's a heavy, limp sheeting material known for its high density and good flexibility—these two qualities allow MLV to dampen sound waves and vibrations. MLV was created in the 1960s and has been used since to add mass to walls, ceilings, ducts, and pipes to reduce sound transmission.



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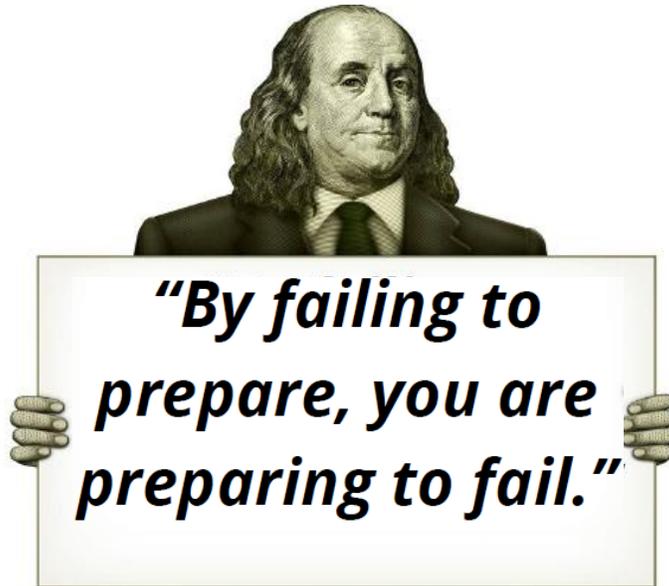
SECTION 2: HOW IS MLV MADE?

Mass Loaded Vinyl is a viscoelastic material. It's a combination of polyvinyl chloride (PVC, or vinyl) and calcium carbonate or calcium silicate. Both calcium carbonate and calcium silicate are high-density, inert materials (sturdy material that doesn't cause or promote change) give MLV its durability and stability. The vinyl makes the MLV flexible and amenable. Combined, these elements create the golden standard of soundproofing because, in addition to effectively blocking sound, the vinyl can be cut, fit, and bent into various shapes and surfaces thereby ensuring maximum soundproofing efficiency.



SECTION 3:

4 COSTLY MISTAKES TO AVOID



MISTAKE #1: NOT PROPERLY PREPARING FOR THE INSTALLATION

Benjamin Franklin once said, "By failing to prepare, you are preparing to fail." And he was right.

When it comes to installing MLV, preparation is key.

Each required tool and supply has a very specific purpose, and it's important you have all of these items handy as you begin the installation process.

Also, have a second set of hands around for the installation process. A few of the steps are a two-person job.



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REQUIRED TOOLS

- [MLV](#)
- A TAPE MEASURE
- T-SQUARE
- [PVC SEAM TAPE](#)
- WIDE HEAD FASTENERS TO DISPERSE THE WEIGHT OF THE MLV SUCH AS PAN HEAD SCREWS, SCREWS WITH LARGE 1-1/2" WASHERS OR HEAVY DUTY STAPLES/STAPLER
- UTILITY KNIFE
- SOUND SEALANT SUCH AS [BOSS 826](#) OR [GREEN GLUE](#)
- [CAULK GUN](#)



OPTIONAL ITEMS:

- SOUND ISOLATION CLIPS
- HAT CHANNEL
- PUTTY PADS



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MISTAKE #2: WINGING IT

There's nothing with 'winging it' in life...unless of course, you're installing MLV.

Then, 'winging it' can be a costly and time consuming mistake.

Even if you carefully prepare for the installation, and have top-rated soundproofing material like Soundsulate™, if you don't install it properly, you won't be happy with the outcome.

The number one complaint we hear about MLV is that it doesn't do what it claims to do. And the first question we ask is, "How did you install it?"

And we know you don't want to waste your time or money, so as you begin your installation process, make sure you follow the instructions outlined in this guide (in order).



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MISTAKE #3: USING MLV TO COVER IMPACT NOISES



Are your upstairs neighbors always dropping things? Do loud footsteps from the unit above you drive you crazy?

If you answered yes, then you might be considering MLV as a solution to reduce these bothersome sounds.

Unfortunately, if this is your intention, then you will be sorely disappointed with the results.

You see, MLV was designed to dampen ambient airborne sound waves such as those from TV's, stereos, and voices. It wasn't designed to reduce impact noises such as items being dropped on the floor, footsteps, or other vibrations. However, MLV can be used for this purpose with good results if you decouple the ceiling. In the next section, we will talk more about this and how it can be done.

MISTAKE #4: NOT SEALING THE MLV PROPERLY

Failure to create a seal with the MLV will result in noises escaping through the gaps. Think of noise like water. Without a barrier in place, it will leak through.

Make sure you caulk all of the seams and gaps—even the tiny ones! Doing this will ensure optimal soundproofing.

The two caulking sealants we recommend are [BOSS 826 Sound Sealant](#) and [Green Glue Noise proofing Compound](#)



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SECTION 4:

GOOD, BETTER & BEST WAYS TO INSTALL MLV

GOOD INSTALLATION

Some people do not want to tear out their drywall and opt to install MLV by hanging it over a drywall area and then drywalling on top of it.

This method creates a sandwich effect where the MLV is flattened between the drywall. While in theory, it might seem like a great idea, after all, this method creates an additional layer for the MLV to work its magic... right?

Well, not exactly.

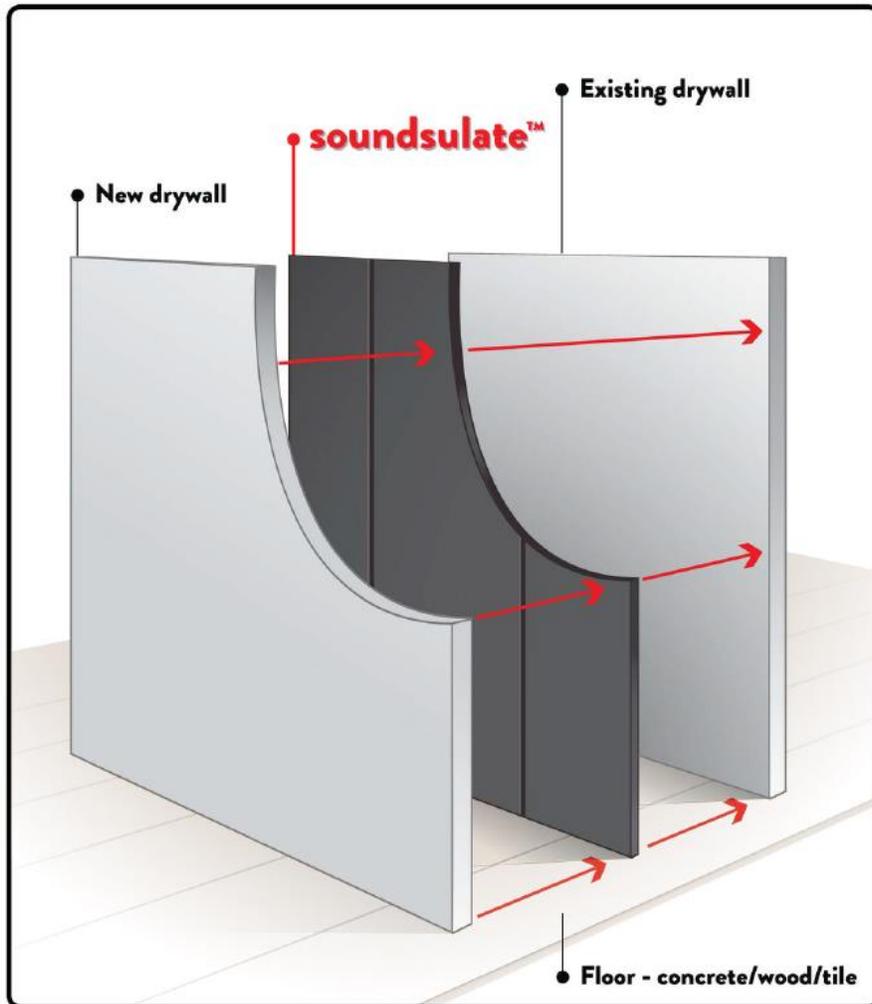
MLV blocks sound waves via movement, and when its movement is limited due to it being smashed between walls, it won't be able to block the sound waves as effectively as it would otherwise.

This method of installing MLV is good because it will reduce noise transmission and is easy to install with minimal disruption to your home. But it's not the best.



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GOOD INSTALLATION



As you can see, this method of MLV installation requires no demolition. Instead, the MLV is simply sandwiched between drywall pieces.

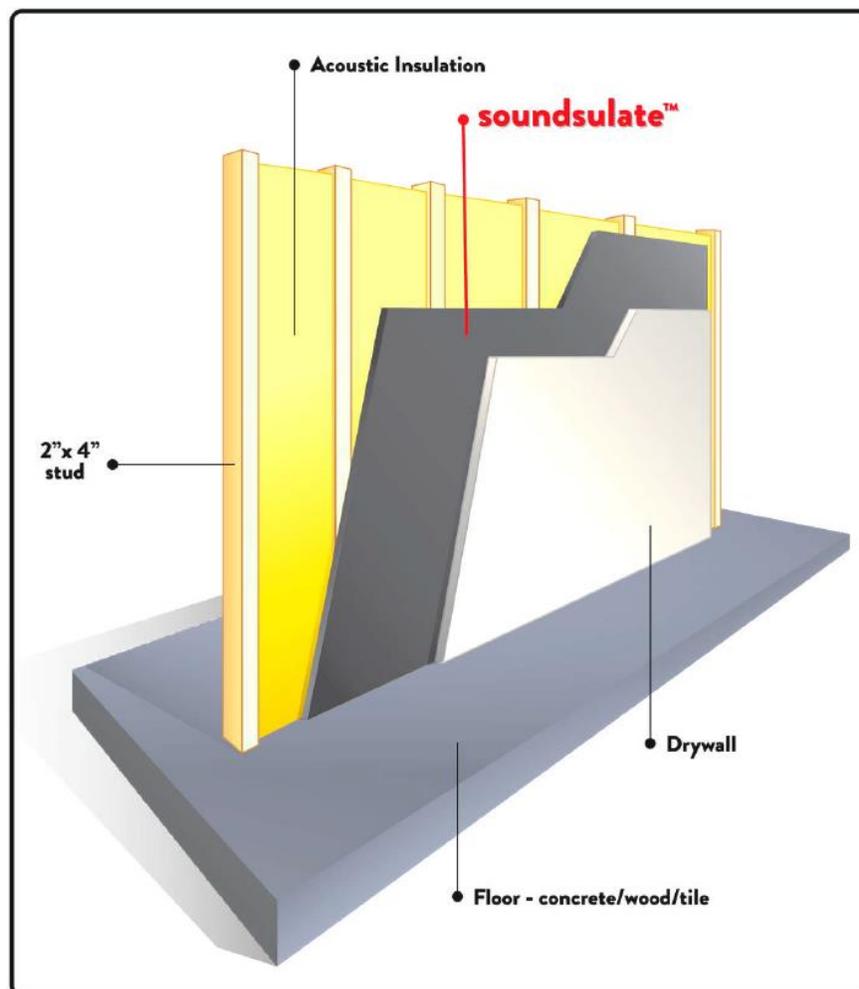


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BETTER INSTALLATION

A better way to install MLV, as opposed to sandwiching it between drywall, is to hang it over studs and then drywall over the area.

The reason this method is more effective than the "good" method is that when the MLV is placed over studs, it has space behind it which allows it to move and vibrate. Since MLV reduces soundwaves by moving, allowing it to retain some of its flexible nature will help lessen bothersome noises.



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BEST INSTALLATION

The most superior way to install MLV is through a process known as decoupling.

Decoupling is defined as separating two objects for the purpose of stopping vibration noise transmission. The purpose of decoupling is to stop the sound vibration transfer from drywall to framing and then to the drywall on the other side.

Decoupling is most commonly done with sound clips and hat channel.

This is accomplished as follows:

First, install the MLV onto the studs as described in the [“How to Install MLV Section”](#).

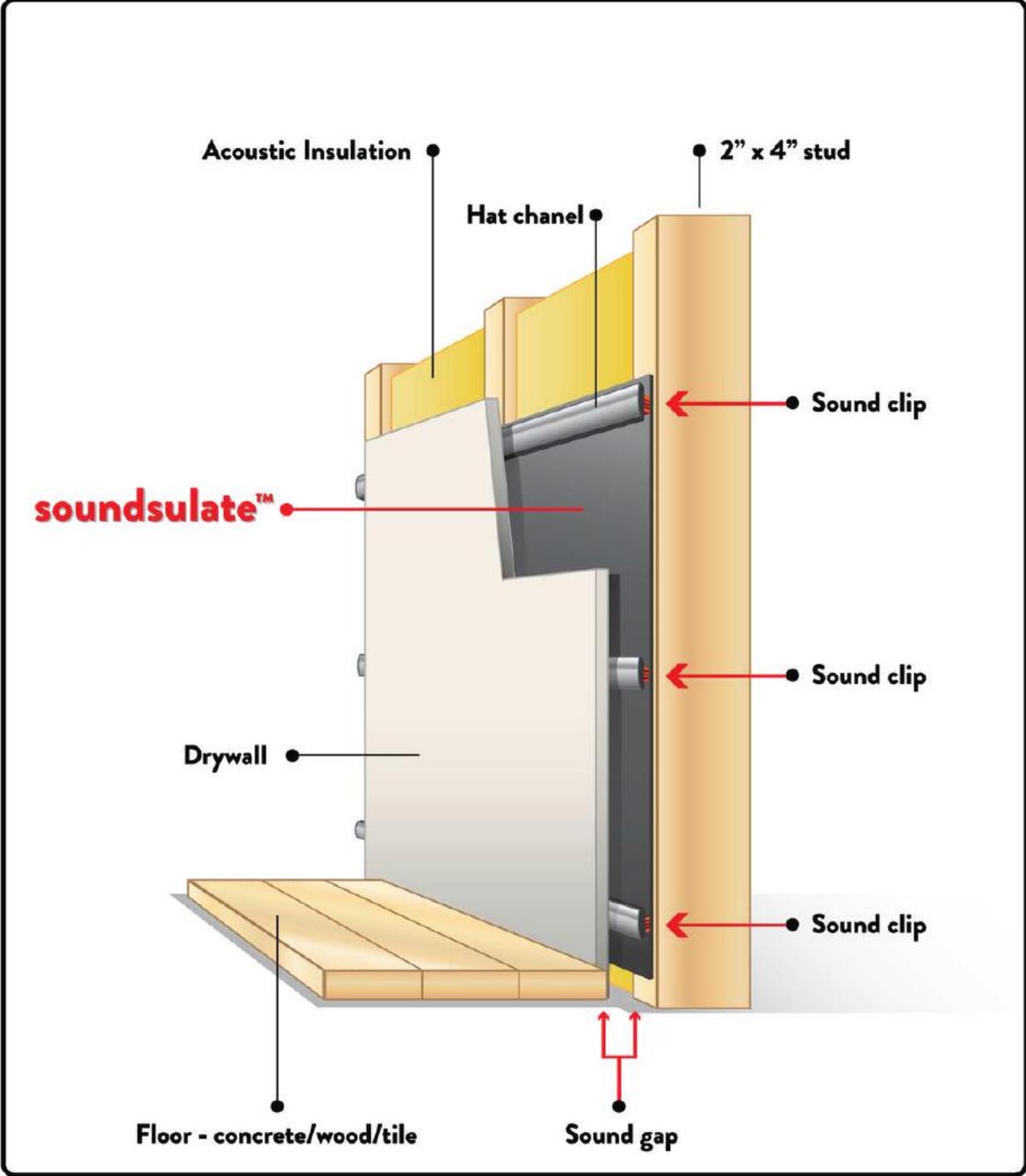
Then, install the sound clips (small metal and rubber pieces that attach to the framing with screws). The metal furring hat channel then inserts into the clips, and the drywall is then fastened to the channel.

This method creates a space with minimal connections between the framing and drywall and gives the MLV room on both sides of it to flex or vibrate. With decoupling, the sound transfer is reduced significantly.



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Here's an example of what decoupling looks like:



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SECTION 5:

HOW TO INSTALL MLV

STEP 1: PREPARATION

1. Install MLV after framing, insulation, and electrical is complete. Although insulation is optional, it may be used for optimal performance.
2. Ensure that all applicable inspections are completed prior to installation of Soundsulate™
3. Install Soundsulate™ prior to “drying in” the building (prior to installation of windows and doors)
4. Acclimate Soundsulate™ for a minimum of 24 hours at temperatures of 60°F or greater to reduce material stiffness

STEP 2: INSTALLATION

1. Measure the distance between the floor and the ceiling.



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2. Unroll the vinyl sound barrier on a flat surface. Using a T-square or straight edge, cut the vinyl with a utility knife to the measured length. It's not necessary to cut the MLV all the way through. It can be scored then pulled apart.



3. For greater sound isolation, use putty pads over electrical boxes before installing MLV.



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In the next step, you'll need the help of another person. Don't try to do this yourself. MLV is extremely heavy and requires someone to hold the MLV in place while another person installs the fasteners. The goal when hanging MLV is to have as few seams as possible. Most people find that hanging it vertically leaves fewer seams.

4. Starting in the upper corner of the wall with two people holding it in place, position the material squarely across the top edge so it drapes the wall evenly.



5. Fasten the barrier along the top edge of the frame by using a fastener every 12-inch span. Fasteners can be pan head screws, heavy duty staples or wood screws with large washer. Only one fastener is required each vertical stud every 36". Continue down the length with the same process.



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To create a seam on a stud, join two pieces of MLV against one another. Do not overlap them –these should be precisely aligned to create a flat surface for the drywall.



ProTip: Some people recommend a hammer stapler as their preferred method to attach staples through Soundsulate™

6. Join two pieces of MLV against one another. Do not overlap them – these should be precisely aligned. Fasten each length of MLV to center of the stud. For seams which fall between studs, overlap one length of MLV approximately 2 inches over the next length of MLV. Cut away the overlap at both the top and bottom of the frame. This is important when installing drywall so it is flush against the frame. Seal the seams with Seam Tape such as [3M 8087CW](#).



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7. Expose the electrical boxes by first gently pressing MLV against the box. Use a utility knife to carefully cut an opening around the edges of the box. Keep the hole as closely and tightly as possible to the box to maintain a strong seal. The material should be cut around outlets, switches, and junction boxes. Gaps shall be less than 1/8". If greater, they shall be either sealed with acoustical caulk or putty pads.
8. Repeat steps 4 to 7 until the entire wall or ceiling is covered with MLV.
9. Install drywall per normal technique (ASTM# C840 – Standard Specification for Application and Finishing of Gypsum Board). Soundsulate™ will be positioned permanently when the gypsum board is hung.

ProTip: The better the seal, the better the sound isolation. It is recommended that an acoustical caulk be used around the perimeter to help seal any gaps between the barrier and the frame.

STORAGE

Soundsulate™ is best when stored in a dry environment and may be stored outside on construction sites with tarps or covering to prevent moisture contact with the fiber layer. If stored below freezing temperatures, material may require 24-48 hours of acclimation to regain pliability.

ABOUT SOUNDSULATE

Soundsulate™ MLV is a top-rated, superior, noise-reducing vinyl sheeting material used by businesses, contractors, and individuals worldwide to reduce the transmission of unwanted noise.

Boasting a flexible, easy-to-use design, Soundsulate™ will help you create a peaceful atmosphere in your home, office, basement, conference room, and more.

Domestically made, and internationally enjoyed, Soundsulate™ has an STC rating of 20 - 32 so you can say goodbye to those bothersome noises for good.

To learn more about sound Soundsulate™ or to schedule a free consultation with one of our sound engineers, call 888-936-1110 or email sales@burningriverbuys.com.



soundsulate™

If it isn't soundsulate, it isn't a sound solution.