



How to Air Seal Your Air Distribution or Duct System

This instructional video has been produced by your WeatherizationPRO Dealer Network members. It is to show our homeowner clients how to install commercial grade duct sealant or duct mastic on the exposed ducts of their Air Distribution (or duct) system in their homes.

The Duct system in your home has most likely not been air sealed, as it has only been in recent years that homebuilders and code officials around the country have been requiring it on new homes. Air Distribution or Duct Systems are typically leaking up to 50% of conditioned air that is moving through them. With such significant amounts of your conditioned air leaking from the system, this explains why some areas of your home may not be as comfortable as they should be. If the duct system is installed in an unconditioned area of your home, such as crawlspaces or attics, then with the duct leakage, you are also wasting your hard earned energy dollars.

By installing commercial grade duct sealant or duct mastic on the exterior of all the accessible duct system, you can significantly reduce your air and energy leakage.

We recommend always having your WeatherizationPRO Home Performance Professional first measure to determine the actual amount of leakage of your duct system using a duct blaster, blower door, and infrared camera and/or air leakage detector (smoke pencil). You should be present during the duct blast and blower door assessment, so you can see where, and how much, your Duct System is leaking air and energy.

We would like to inform you that the very best way to air seal your ENTIRE Air

Distribution or Duct System is from the inside of your Duct System. This may be done using a pressurized air duct sealing system such as AeroSeal Duct Sealing. Many Home Performance Professionals around the country own and operate these great systems. For more information please contact your local WeatherizationPRO Dealer Network Professional.

These instructions and video will show you how to air seal the portions of your duct system that are exposed or accessible to you. Typically these duct systems are ones installed in unfinished basements, crawlspaces, and attic.

Please consult with your local WeatherizationPRO Dealer or Home Performance contractor if you need help in determining what type of duct system you have in your home and how accessible it really is.

The tools and materials you will need are:

- **Commercial-Grade Duct Sealant or Duct Mastic**
 - **Standard flat screw-driver and hammer or mallet**
 - **Paper Type Dust Mask Respirator and Safety Glasses or Goggles**
 - **2” Throw-a-way Brushes**
 - **Several Pairs of Brown Jersey Gloves, or other type of heavier disposable gloves**
 - **Old Clothes that may get dirty (duct sealant does not clean out of clothing very well)**
 - **Stable 6 foot step ladder**
 - **Utility Knife**
 - **Several damp cleaning rags, and drying rags or towels (that may be thrown away after use)**
1. As you begin your air duct sealing project, you should take all normal necessary safety precautions and use good safety practices. You should always wear a respirator or dust mask, safety glasses or goggles, old clothes, and gloves as you are applying duct

sealants or duct mastic.

2. It is best if the area of the house in which you are working is well ventilated.
3. Before you begin applying duct sealant or duct mastic to your duct system, you should clean the dust and dirt from all surfaces of the duct system with a damp cleaning rag, and dry the surfaces with a drying rag or towel.
4. Duct sealing materials are actually pretty easy to apply. Since most of the sealant will eventually be covered up with walls or ceiling, aesthetics are not very important. We suggest applying the duct sealant materials very liberally to ensure that all seams, gores, gaps, cracks, and holes in the duct system are completely sealed.
5. There are two basic methods of applying duct sealing materials: 1. With throw-a-way brushes, and 2. With disposable gloves and your own hands.
6. When using the brushes, simply dip the brush into the bucket of duct sealant and get a generous amount of duct sealant on your brush. Then simply “paint” the duct system seams, gaps and cracks with very liberal amounts of sealant. “More is always better” when applying duct sealant. We recommend “painting” all areas of duct that you can see well as to what you are “painting”. Never apply duct sealant to furnace exhaust venting, which typically comes off the top of a furnace and vents vertically through the crawlspace or basement ceiling or roof deck in an attic.
7. We recommend using **gloves** when air sealing hard-to-see, and hard-to-reach areas of the duct system, such as the top longitudinal seams of round branch ducts which may be installed in basement or crawlspace ceilings. Simply dip your gloved hand down into the bucket of duct sealant, and get a generous amount of sealant on your gloved fingers and palm of your hand. Now spread (or rub) the sealant on the duct(s) everywhere you feel a seam, gore, gap, crack, or hole in the duct system.

8. Continue this process until all the accessible and exposed duct has been generously coated with duct sealant. Be sure and go back and inspect all of the duct system to ensure that you have not missed sealing any areas of the duct system.
9. It may take up to 24 hours for the duct sealant to cure, and there may be a residual smell of duct sealant in the air. We recommend installing a carbon odor filter in the place of your regular furnace or air handler filter. Leave this filter in place until your next regularly scheduled filter change. This should help dissipate the residual odor.
10. After curing, most duct sealants remain somewhat pliable, rather than completely firm to the touch. If this is the case with your duct sealant, it is completely approved.
11. When your duct sealing project is complete and you have inspected your own work, you may dispose of the used brushes and gloves in your normal plastic garbage bags and containers.
12. You may replace the lids to the buckets of duct sealant with a rubber mallet or hammer and save the left over sealant for your next duct sealing adventure.
13. After completion of your project, be sure and clean the entire work sight, and call your WeatherizationPRO Home Performance Dealer to come back and re-test for duct air Leakage with their duct blaster, blower door and other Home Performance diagnostic equipment.
14. This air distribution and duct sealing project is a one-time project, and you should be able to feel the difference in comfort in your home for many years to come.

(Sentence below scrolls across video page as it is read to finish video)

For more information, or to purchase your commercial grade duct sealant materials,

contact your local WeatherizationPRO Dealer / Contractor or call our national

WeatherizationPRO headquarters in Denver, Colorado at 303-978-1500. You may also

return to the home pages of our WeatherizationPRO.com website and contact us

electronically.