



AEROSOL SEALING FAQs

Is the sealant safe to use inside houses?

Yes, the current sealant is a commercially available sealant that is diluted with water and is GREEN Guard Gold Certified, meaning that it meets the stricter certification criteria required for use in California schools and healthcare facilities. The toxicity of this sealant is well below levels of many other materials used in buildings.

How much will this tighten houses?

A reduction of 80% is typical with a range of 65% to 95%. Houses have been sealed to below 0.8 ACH50, and multifamily units have been sealed to 0.2 ACH50. The tightness depends on the size of envelope leaks and the length of sealing.

How large of leaks will this seal?

The process will seal gaps up to 5/8", but wider gaps take longer to seal. Aerosol sealing is most efficient on gaps 3/8" and narrower. Those narrow gaps can add up to significant leakage and are typically not cost effective to seal manually.

How long does the sealing take?

The actual sealing typically lasts one to two hours. Tighter houses that do not require much sealing will take less time, and houses with wider leaks will take more time. Additional time is required for equipment preparation and clean-up.

What does the sealant look like after it is applied?

The sealant looks like gray caulk that can be painted.

Does the sealant remain flexible and what is the durability of the sealant?

The sealant remains flexible after drying and preliminary tests have shown no seal failures after more than 1,000 pressure cycles at 800 Pascals.

How long after the sealing do I need to wait to work in the house?

The house needs to be aired out for 5 to 10 minutes after sealing by opening windows and setting the fans to high speed. Work in the house can continue as soon as the sealing equipment (e.g. spray nozzles and hoses) is removed.

How much will the house be pressurized?

A blower door is used to pressurize the house to about 100 Pa —about twice the pressure used for a blower door test. The higher pressure helps reduce the sealing time without damaging the house. In some cases lower application pressures (~75 Pa) will be considered to prevent over pressurizing attic entrances or other large openings.

What surfaces need to be protected for the sealing?

The sealing will produce a thin layer of sealant on horizontal surfaces. Any finished horizontal surfaces need to be covered and any large intentional openings (e.g. exhaust fan ducts) need to be sealed manually. New windows and walls do not need to be covered.

Can the sealing be performed in cold weather?

There are practical limits to the weather conditions for aerosol sealing. While the sealing equipment has the ability to heat the air used for pressurizing the building to facilitate sealing in humid or cool conditions, in very cold conditions there is a concern that the sealant may freeze during application. Outdoor weather conditions of 40°F or higher would be most appropriate but this project will investigate appropriate protocols for sealing below 30°F.

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