Equipment and Caulking Installation Instructions

Using Caulking Applicator Guns

There are different types of caulking applicator guns available. The recommended procedure when using the different styles will be described in Sections A, B and C. Section D will then describe the recommended procedures to follow to install the caulk and finish the job.

Section A

Applying Caulk in Plastic and Cardboard Fiber Foil Wrapped Cartridges

There are a variety of applicator caulking guns available to do firestopping. We recommend using a smooth rod style rather than the less expensive ratchet rod type. When dispensing caulk from a 29 ounce-size cartridge, we recommend using the rod tape gun with at least a 12:1 thrust ratio. The higher thrust ratio means less hand fatigue since the firestopping caulks are usually high viscous materials. It will also help when the product becomes stiffer in the colder temperatures. (12:1 ratio generates approximately 300 pound thrust)

For manual single component cartridge applicator guns.

Select the correct size manual drive frame-style cartridge gun for either the 10-ounce (300ml) or the larger 29-ounce (850 ml) plastic or cardboard fiber foil wrapped tube type. (see photo #1a)

Using a utility knife cut off the end of the plastic tip/nozzle of the sealant tube to the desired opening size. The cut can be straight across (90º) or angled (45º). Cutting too small of an opening will restrict the flow of material and a smaller bead size than needed may result. The smaller opening will also require more triggering action (pressure) to move the material out of the tube.(see photo #2a)

Using a screwdriver or other pointed utensil insert it into the plastic nozzle to puncture the membrane and allow the caulk material to flow.

Pull back the push rod of the frame-style caulking gun to its full extension.

Drop the cartridge into the frame insuring that the plastic nozzle of the cartridge is placed though the opening in the end plate. (see photo #'s 3a & 4a)

Repeatedly pull the trigger of the applicator gun until the push rod is advanced to the end of the cartridge. The caulk begins to flow out when some resistance is felt.

When the desired amount of material has been advanced, stop triggering; release the pressure by pressing the lever (tab) located at the back of the handle with your thumb. This causes the push rod to slip and back up stopping the flow of material. (see photo #5a)

Refer to section D to complete the installation procedure.
(see photo #6a)

Photo 1a

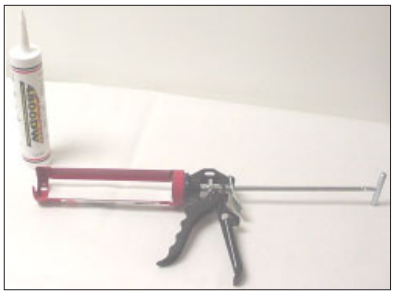

Photo 2a

Photo 3a

Photo 4a

Photo 5a

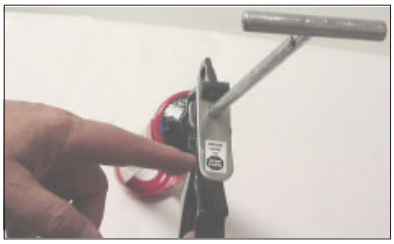

Photo 6a

Section B

Applying Caulk with Refillable Bulk Loading Applicator Gun

Caulking to be used is usually shipped in a 5-gallon (18.9 liter) plastic pail. (photo #1b & 2b)

To begin the loading process, remove the front cap containing the nozzle. (photo #3b)

With a utility knife, cut an opening in the plastic nozzle (cut can be straight or angled). (photo #4b)

Advance the plunger and push rod down to the end of the barrel.

Coat the threads at the end of the barrel with a solvent (oil) to prevent the accumalation of material. (photo #5b)

Immerse the open end of the barrel into the material to a depth of approximately 1-inch.(photo #6b)

Move the immersed gun slightly around so the material will adhere and form an air seal.

Hold the barrel steady, grip the T-pull and slowly pull the push rod back drawing the material into the barrel. Pulling the rod back to quickly may result in air pockets and an incomplete fill.

Remove the gun from the pail of material and scrape off the excess amount that has accumalated on the barrel.

Replace the front cap and nozzle. (photo #7b)

To stop the flow of product, stop triggering and depress the pressure and release tap on the handle (photo #8b)

Now you are ready to install the material into the openings and joints.

Refer to section D to complete the installation procedure.

Photo # 1b

Photo # 2b

Photo # 3b

Photo # 4b

Photo # 5b

Photo # 6b

Photo # 7b

Photo # 8b

Section C

Applying Caulk in a Foil Sausage Pack, Using Pre-configured Applicator Gun

See photo #1c

Photo # 1c

Remove the front release cap/nozzle. (photo #2c)

Photo # 2c

Depress the pressure release tab while simultaneously gripping the T-pull; pull the piston rod to the back of the gun.

Put foil sausage into the barrel of the gun. (See photo #3c)

Cut off the crimped end of the sausage with a knife or scissors. (See photo #4c)

Replace the front release cap/nozzle.

Trigger the piston rod until resistance is experienced and the product starts to flow out.

If there is difficulty with the material coming out, check to see if the opening was cut too small or if other material is obstructing the flow.

Once the product has been completely dispensed, remove the front cap, pull or eject the empty sausage skin and repeat the process with a new sausage pack.

Refer to section D to complete the installation procedure.

Photo # 3c

Section D

Installing Firestop Caulk

All firestopping installations must be performed in compliance with a tested and listed firestop system design. The testing laboratories like Underwriters laboratories (UL) publish these listings.
For the appropriate listing , consult the manufacturer's literature or the testing laboratories Fire Protection Directories and web sites.

Photo # 4c

The manufacturer recommends an individual who has been properly trained in the correct procedures should perform all firestop installations. The individual must be able to read and understand a tested firestop listing design.

The applicator should have the following materials and equipment to **correctly and safely** install firestop caulking.

- •Safety Glasses
- •Gloves
- •Utility (box) knfife
- •Stainless Steel Spatula
- •Cleaning rags
- •Plastic spray water bottle (quart/liter) with finger pump trigger/nozzle

Areas to be firestopped should be clean, free from water, excessive dirt, dust, debris, and grease. For the best results, the ideal atmospheric temperatures and enviroment would be: dry, 60º-75º F (15º C-24ºC), R.H. 50%.

When damming or fire insulation material is required the following information should be considered before commencing:

- Backer rod used as a damming or support material should be installed into the opening in a thickness and compressed sufficiently as to not dislodge and fall out under normal building movement. Wrap the backer rod completely around the penetration(s) and recess it to accomodate the required amount of firestop caulk.

- Mineral wool when required, as an insulation material should be installed into the opening compressed to a thickness as to not dislodge nor fall out under normal building movement. The mineral wool, usually 4pcf, should be installed to the compression required by the firestop listing being used. The orientation of the mineral wool is also very important and may be the difference of the system being in compliance or not. For construction joints or through penetration in floor (horizontal) rated assemblies, the mineral wool or similar fibrous material should be installed with the lamination in a vertical orientation. The opposite is the rule for joints and through penetration openings in wall (vertical) assemblies. Here the laminations should be placed in a horizontal orientation. Installing the mineral wool in these different lamination directions allows the material to be compressed to a density required for fire rating and building movement. **Do not install mineral wool that has become wet i.e water, rain, or snow exposure.**

Water base caulks adhere to some construction materials better than others. Applying a light mist of water to these surfaces can in some instances, help the bonding process. Mineral wool, is one of these materials, especially when it is in a vertical orientation.

Tooling the installed material can be done in several ways;

- **Dry tooling:** after the material is put in place, using a spatula or other tool that has not been wetted with water, smooth it out.
- **Wet tooling:** after the material has been put in place, using a spatula or other tool that has been wetted with water, smooth it out.
- **Wet tooling:** After the material has been installed, lightly mist the material with water. Use a plastic water spray bottle, turn the nozzle to a mist spray orifice, hold the bottle 10-12 inches (255-305 mm) from the area. **DO NOT APPLY WATER TO THE MATERIAL IN A CONCENTRATED JET SPRAY.** This will apply too much water causing the material to dilute and run out.

Penetrations

Install the correct amount of caulk material into the opening (annular space) around the service penetration to the depth/thickness required. Make sure that caulking is in intimate contact with the substrate and the penetrating item. Once the caulk is in place, tool the material with a tooling utensil (spatula) to a smooth finish. This will push the installed material into areas not covered in the initial caulking procedure. It will also help to ensure a better bond with mating construction materials.

Construction Joints

Some construction joints do not require damming material or mineral wool to be used to effect a firestop system. When filler caulk material is the only component required, the installation must be installed in accordance with the listing being used. This usually requires the filler material to be installed **into the gap/joint.** Once the caulking has been troweled or gunned in place, the installed material should be tooled to a smooth finish. Work the material to ensure no voids and air holes are left. This is particularly important when caulking to fireproofing materials. Cured fireproofing is very porous and the caulking must be tooled to it to ensure a tight seal and a secure mating surface bond. When fibrous (mineral wool) insulating material is a required component of the firestop system, refer to the procedures described above for proper installation before applying the filler caulking material.

Note: *All installation procedures of firestop caulk and spray mastic materials outlined in the proceeding information are* ***water-based compounds***