Caulking and Sealants

Using caulk or sealants to protect from wind, dust, moisture, etc is an easy way to improve your home. Preventing or fixing drafts can save some homeowners up to 10% on their energy cost (U.S. Department of Energy). When it comes to sealing up the home there can be confusion as to what type of product is best for the job. Manufacturers produce a myriad of products all promising to adhere better, stretch farther, and last longer. It is easy to become overwhelmed. Which to use caulk or sealant?

What type of caulk/sealant is best for the job silicone or polyurethane, acrylic or MS polymer?

What's the difference between caulk and sealant?

To begin how do you know when to use a caulk or a sealant? Many people use the term caulk and sealant interchangeably. While on the surface caulks and sealants serve the same function, to fill gaps between building materials, there are a few notable differences. Elasticity is the major difference between caulks and sealants. Caulking is best used in areas with small amounts of expansion and contraction due to its rigid nature. Sealants, on the other hand, are mainly composed of silicone and lend themselves to areas where the expansion and contraction of the space is greater. Caulk messes are easily cleaned up with water as opposed to sealant spills which require a solvent in order to be removed. Many caulks are paintable whereas most sealants are not. When deciding whether to use caulk or sealant it is crucial to keep in mind the environment the caulk/sealant will have to endure.

Water Based/Acrylic caulk

Acrylic caulking is a highly user friendly type of caulking and may also be referred to as painter's caulk. Acrylic caulk has a strong adhesion to many construction materials and is some of the easiest caulk to use. It cleans up well with water and is non-toxic. Acrylic/Water based caulking is a cheap and elementary option when doing interior jobs since it is paintable after drying. It can also be used in exterior applications. One of the cons of acrylic/water-based caulking is it requires specific weather conditions during the curing process. For the best possible cure, make sure it is in a low humidity area with temperatures above 40 degrees. Acrylic caulking does not hold up well in areas subject to large fluctuations in temperature.

- Perfect for:
  - Around the interior portion of Ply Gem or Jeld-Wen windows
  - Jointing around the interior portion of glass door frames
  - Filling gaps before interior painting
  - Sealing cracks in plaster
  - Stopping air leaks inside the home
- Not great for:
  - Areas subject to large temperature fluctuations

Silicone Caulking/ Sealant

Silicone sealants are the most well-known types of sealants. Silicone is a slightly less user-friendly option than acrylic since it tends to be harder to work with. While it does require a solvent for clean up, it is well worth the potential hassle. Silicone can be applied in areas where there are extreme temperature fluctuations due to its highly flexible nature. These types of sealants are very resistant to water. Silicone sealants are resistant to UV radiation and resist mold and mildew. These sealants are highly bondable with most materials, a notable exception being wood, but are the most effective sealant on the market for glass, metal, and ceramic tile. Silicone based sealants can be applied almost anywhere, interior or exterior, at any temperature.

- Perfect for:
  - Around the interior and exterior areas of Jeld-Wen or Ply Gem windows facing the East or West
  - Jeld-Wen or Ply Gem Windows located in high humidity areas such as bathrooms or saunas
  - Around shower doors
- Not great for:
  - Areas that need painted, instead try MS polymer caulk/sealant
  - Wood

Polyurethane caulk/sealant

These are widely used due to their many amazing properties such as low shrinkage, paintability, strong adhesion, and resistance to aging.

Unlike both acrylic and silicone caulking polyurethane caulk can resist abrasion making it perfect for use in high traffic areas. It is also highly bondable to wood, unlike silicone based caulking. Some of the drawbacks include poor resistance in humidity and low resistance to UV radiation.

- Perfect for:
  - Exterior window frames
  - When bonding to wood
  - High traffic areas such as pavement joints or garages
- Not Great for:
  - Areas where there are high temperature fluctuations
  - When other caulking will easily fit the needs of the project

Modified-Silicone Polymer caulk/sealant

MS Polymer sealants are the latest and potentially greatest thing to happen in the caulking world. They are easy to use, cure quickly, can be applied in extreme temperatures, and are water resistant. They are extremely durable like polyurethane caulking, but are more environmentally friendly. The only known cons of MS polymer at this time is that they are more expensive than other types of caulking and have not been on the market very long.

- Perfect for:
  - Sealing exteriors of glass windows
  - Sealing exteriors of glass doors
  - Around vents
  - High traffic areas
- Not Great for:
  - When other caulking will easily fit the needs of the project

Tips for successful Caulking and Sealant Application

1. Pick the correct caulk or sealant that will stand up to the conditions that are going to be experienced by the material. For your convenience, reference Picking the Right One, another of our informative articles, to see which Atkinson’s Mirror and Glass preferred brand fits your caulk or sealant needs.
2. Pay attention to the weather including temperature, humidity, and pollen in the air. Having high or low temperatures can affect both curing time and size of the joint at application. High humidity can also affect curing time and the ability of the caulk to adhere to one or both of the surfaces during application. One thing many people don’t think about is the amount of pollen or debris in the air this can also affect the efficiency of the caulk or sealant.
3. Remember to clean the surface properly.
4. If you are filling a crack or joint that is larger than ¼” consider using a foam backer rod.
5. Apply primer if necessary.
6. Remember to cut the nozzle of the caulking tube at a 45 degree angle. Always cut the nozzle in small increments to ensure that you don’t end up with a hole that is too big and therefore delivers too much caulk during the application process.
7. Depending on the type of caulking or sealant you are using remember to keep some water or solvent on hand in order to clean up any messes that may occur.
8. Apply caulking in 2-3 feet strips this will allow you time for “cooling” before the caulking starts to dry.
9. “Cooling” the caulk is the process of smoothing out the caulk and allows for better adhesion. There are two common ways of cooling. The first is done by wearing a latex glove and using your finger to smooth the caulk. It may also be beneficial to apply some solvent or water to the finger, but not always necessary. You may also use a variety of tools such as a Red Devil putty knife. It is important to remember during the cooling process to leave enough caulking present in order to ensure a proper seal.
10. Depending on the type of caulking and the weather the cure time will vary. Once the caulking has cured you will have a house that is protected from drafts, noise, other nuisances, and can potentially save you money!