# The Master Caulksmith™

by *Roy Cannon*

## The Art of Tooling

Tooling of joints – sure, the subject might seem mundane at first glance – but there's a lot more to it than meets the eye. In many ways, knowing the specifics could mean the difference between a professional, long-lasting, aesthetically-pleasing piece of work or a callback. It's definitely worthy of a little discussion…

Tooling of sealants is the use of an object to smooth and move the sealant into a position advantageous to both an acceptable appearance as well as a watertight seal capable of enduring years of environmentally induced movement and degradation. The primary functional purpose of this process is to make the sealant as intimate as possible – with the substrate being sealed providing the best possible chance for proper adhesion.

Sealant manufacturers have drilled the basics of tooling into most experienced sealant applicators for years – this isn't news. Those basics are to tool the sealant concave with constant pressure to ensure adequate contact of the sealant with the surface to be sealed. The concave configuration is recommended to allow for a flush surface when the sealant is compressed, and also to create the infamous "hour glass" configuration that provides for the greatest movement capability. The inner concavity is provided by cylindrical backer rod and the outer concavity results from a rounded edge spatula utilized in the tooling process. While achieving this functionality, the craftsman must also create an aesthetically pleasing "line" in the building façade. Achieving all of this simultaneously is the challenge presented to the applicator.

The objects used for tooling are diverse, ranging from the human finger moistened with saliva (not recommended due to toxicological reasons) to a cut off section of backer rod and everything in between. There are many "tools" manufactured for the sole purpose of tooling sealant applications, but some of the best are custom made by the sealant applicator himself and are often custom designed for the particular project at hand – *of which only the applicator would be close enough to understand.*

Taping of joints is another part of the tooling process which aids in that unending drive for perfection. The rule here is to always remove the tape before the sealant begins to skin or cure – or in other words, while the sealant is still wet. Do not apply excessive amounts of sealant as this will make removal of the tape an art in and of itself in attempting to avoid webs of sealant from attaching themselves to you and the building or pavement surfaces. Whether taping or not, applying just the right amount of sealant is an art only gained by experience. The objective here is to fill the joint with enough excess to make contact with the tool, but not so much excess as to end up with a quart of waste from ten lineal feet of sealant joint.

When it comes to using "slicking" agents, always check with a manufacturer before choosing one. But it's important to recognize that "dry" tooling is always preferred by the manufacturer in the interest of eliminating the possibility of contaminates being deposited onto the sealant surface. However, the reality of the situation is that "slicking" agents are used and usually do result in a more aesthetically pleasing application for the applicators focused on perfection. A slicking agent can be beneficial in optimizing appearance – especially where clean, uncontaminated mineral spirits are used.

Proper tooling of sealant joints will only result in satisfaction to all parties concerned from the owner, the architect, the general contractor, to the sealant applicator himself. With tooling, there's a heck of a lot more than meets the eye – or blueprint for that matter. Most experienced sealant applicators know that joints are *not always* constructed as our nice neat drawings theorize and irregular joint widths and depths are not uncommon. What this points to is the importance of the techniques, skill levels, and attention to detail practiced by the sealant craftsman / applicator. Yes, I said *craftsman* because this is exactly what a sealant applicator who actually takes pride in his work really is. The craft that a sealant applicator/craftsman carries out is every bit as important as the stone mason, the carpenter, the tile setter, etc. When it comes to keeping the finished product being protected from the elements, the sealant application is basically where the buck stops. And when you tool it right, you add that final line of defense.

*If there is a subject you would like to see discussed and published on the Master Caulksmith section at Pecora.com, simply direct your request or question via e-mail to Cannonr@pecora.com. I appreciate the opportunity to share my many years of sealant knowledge and experience in the interest of supporting those who strive for perfection throughout the waterproofing industry.*

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