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Wasp Exclusion For Exterior School Fixtures



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Wasp Nests Around Our Schools

We are all too familiar with the honeycombed umbrella shaped paper wasp nests that we often see hanging under our buildings roof soffits. Some of us have even had experiences where a wasp nest is actually built within roof and wall voids, after the wasps have entered the school via a crack, gap or hole on the structures exterior. However, it just doesn't stop there. Wasps will build their paper nests inside of just about anything that they can work their way into.










Paper Wasp Nest

Over the years, I have observed, removed, or preformed exclusion services on wasp nests that are constructed within many of our districts exterior fixtures (apart from the structure proper), such as: big toys, swing sets, and other playground apparatus; handrails; free standing light fixtures; parking signs and school signs; and even fencing. Before we examine two examples of non-pesticide exclusion techniques on these types of items, we need to look at some basic exclusion materials and starting tips.

Examples Of Exclusion Materials/Check List

- ✓ **Caulking Gun**
- ✓ **Silicone Caulk or Elastomeric Sealant (or other types of exterior sealants: Concrete filler or patch, etc.)**
- ✓ **Steel Wool (or other suitable filling material)**
- ✓ **Putty Knife**
- ✓ **Scissors or a Sharp Knife**
- ✓ **Flexible Screening Material or Hardware Cloth**
- ✓ **Copper fine mesh screening**
- ✓ **Metal or Copper Plating (for large gaps or holes)**
- ✓ **Duct Tape (the "miracle stuff" – you never know where or when you may need it!)**
- ✓ **Personal Protective Wear or Bee Suit**
- ✓ **Clean Up Equipment (rags, paper towels, broom, etc.)**

Exclusion Tips

-  **Inspect the item completely for all possible wasp entry and exit points for exclusion purposes.**
-  **Use the right material for the job: Stainless steel wool or copper screening/plating when water and rust is a factor. Paintable silicone caulk if the item is to be painted or re-painted.**
-  **Use steel wool for cracks and gaps that are too large for standard sealing methods and to act as a backstop for your sealant. Steel wool also acts as an impenetrable barrier preventing wasps from digging through uncured sealants. Use screening or plating to cover larger areas and assure that all edges are sealed.**
-  **Duct tape, can be used as a temporary exclusion material (until the item can be permanently sealed up) it can also be used as an impromptu sealer backstop; it can be used to re-seal the end of your caulk tube (if you don't have an end cap); and it may also be used to secure a shop vacuum hose (at the entry point when vacuuming up wasps prior the exclusion procedure).**
-  **Assure that the sealant is completely injected into the gap or crack that you are sealing. Use a putty knife to smooth out the sealant (this will also work the sealant further into the voids for complete coverage).**
-  **Do not use aerosol spray insulation foam. The spray foam will degrade outside over time due to the elements and ultra violet light.**
-  **Always use caution around stinging pests, using sharp knives, and assure that you have any necessary Personal Protective Gear.**

Now that you have the necessary materials and helpful exclusion guidelines, lets take a closer look at a couple of easy "how to" examples of wasp exclusion.

Example 1: School Parking Lot Signs

The situation: Wasps were using this parking sign as a harborage area. Wasps had entered the fixture behind the sign where there are gaps at the top and bottom of the sign and where the sign is mounted onto the post.

The problem: Students getting stung by wasps when arriving and departing from school.

The solution: Sealing the wasp inside the fixture and effectively eliminating the wasps and their harborage area.

The procedure:

► Inspect the entire sign post and locate all points of entry the wasps are using. (Figure 1.)

► Lay out all exclusion materials and tools so you can work quickly. (Be aware of wasps exiting from or returning to the sign).

► Pull off (and twist into balls) the proper amount of steel wool needed to tightly fit into the bolt holes. Make sure you make enough of these little steel wool balls to fill the appropriate number of holes, and then set them off to the side.

► Simultaneously place one steel wool pad into the top and bottom gaps between the post and the sign. Note: this will quickly and efficiently seal off the two major gaps that you need to fill and prevent the vast majority of wasps from escaping. (Figures 2 & 3)

► Now you can place the little steel wool balls (that you have already prepared) into the bolt holes located on the back post. (Figure 4.)

► Seal all steel wool into place (top gap, bottom gap, and all bolt holes). Assure that all of the silicone sealant is smoothed out for complete coverage. (Figure 5.)

Note: It is always important to re-inspect the work site that you have been working in when you have finished the project. When you take a final look at your finished work you may notice small gaps that you may have missed sealing and /or materials left on the site. Never leave the site until you are certain that no potentially harmful items have been left that children might be harmed by.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Example 2: School Parking Lot Lights

The situation: Wasps were using the gaps around this light pole as a harborage area. Wasps were entering the fixture between the gaps where the pole met the metal base, and where the metal base meets the concrete base.

The problem: Students getting stung by the wasps when entering or exiting the bus when being transported to and from school.

The solution: Sealing the wasp inside the fixture and effectively eliminating the wasps and their harborage area.

The procedure:

► Inspect the entire light fixture and locate all points of entry the wasps are using.

► Lay out all exclusion materials and tools so you can work quickly. (be aware of wasps exiting from or returning to the fixture site.

(Figure 1.)

► Pull off (and twist) the proper amount of steel wool needed to fit tightly into the gaps.

► Use a putty knife to tightly pack the steel wool into all of gaps (repeat this step until all gaps have been secured with steel wool. (Figure 2.)

► Seal all gaps with silicone and smooth out the sealant for complete coverage. (Figure 3.)



Figure 1



Figure 2



Figure 3

So there you have it, two examples of non-pesticide exclusion methods for wasps. Keep in mind that these exclusion examples can be used on virtually any type of playground apparatus or fixed outdoor equipment.. Always remember to work safely and cautiously when performing an emergency or a planned exclusion service. Keep all students and staff away from area while working as wasps may become aggressive. Also, keep in mind, the best time to perform wasp exclusion is prior to dawn or after dusk.

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Informational Resources:

► *Truman's Scientific Guide To Pest Management Operations Sixth Edition; Bennett, Owens, Corrigan; A Purdue University/Advanstar Communications Project, 2003.*

► Actual exclusion experiences within the Westerville City School District.

► All photographs by: Allen Wilson, Safe Zone IPM Consultation Services.