

What is an Outdoor Adhesive?

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What is the difference between a glue and an adhesive? Only vocabulary. We tend to call domestic stick-um stuff 'glue' and professional stick-um stuff 'adhesive'. Often people consider thin stick-um that has no gap filling capacity to be 'glue' and thick stuff that can fill gaps to be 'adhesive'. I know of no real official distinction between the two terms.

What is important is to know what you want to stick to what, for your glue or adhesive needs to stick to both. You need to know if the final joint will be rigid or flexible, for a ridged glue in a flexible joint will crack, and a flexible glue in a ridged application will let it move or creep. You also need to know if you have a tight fit or do you need an adhesive that is capable of filling the gap. And if you are working outdoors, you need to choose between 'water resistant' or 'water proof' adhesives. A bit of study at the glue counter in the renovation store will answer most of those questions -- but take a magnifying glass with you as the type on the label is very small.

One of my favorite but little appreciated "glues" is actually a putty with very strong adhesive properties -- Epoxy Putty. It can be used to fill unlimited gaps and stick two things together as well. It can also be used to replace broken off pieces. Give it a spike or a hole to grip onto, and then sculpture it to replace the original. Most of these putties are two different coloured sticks that you simply fold together over and over like making good pie shells, until there is only one colour. Then it is ready for use. There is another epoxy putty that has a slightly thinner consistency. It is a cream with separate catalyst epoxy wood filler. You may need to make a bit of a mold to shape this thick liquid until it becomes hard, and usually we wax the mold so it doesn't become a permanent part of the project. When either of these are cured they can be sanded, scraped, even tapped for threads. If you want something to slide in and out of this new piece, wax the part you don't want to have stuck and then mold the putty right around it for a perfect socket or even a threaded fit.

One unique epoxy can be used underwater and will stick to things that few adhesives stick to, like PVC and outdoor plastics. Check out Wet-Bond.

All the epoxies stand up well to outdoor conditions except one: they do not resist UV light well, so if you use them where they will be exposed to the sun, you must paint, stain or cover them with some coating that contains UV filters.

As for gluing things together outdoors, water 'resistant' means that it will work well where it gets an occasional shower, but it does not sit in water and is probably protected with paint or some other weather shield. Water 'proof' means that it can actually sit in water. So if it is to be somewhat protected, regular carpenter glues labeled for outdoor use will do the job. For material that needs to be water proof, we use Marine Adhesives -- often purchased at boat stores -- or epoxies. For structural work on both wood and concrete we use gun applied construction adhesives rather than liquid carpenter's glues. Structural work requires that there will be no creep or slippage in the adhesive (quite different from flexible sealants).

Most of the construction adhesives are solvent based, called thermal plastics and must be applied to dry wood or concrete, often a problem outdoors. However some are formulated specifically for use on moist surfaces, some even for application over thin ice. Generally you will want to choose the least expensive adhesive that will do your specific job -- in fact that is why there is such a variety of construction adhesives available. Define your project first, check the weather conditions and then read the labels on each product to find the right one.

PL Premium, an upscale very good all purpose polyurethane construction adhesive is probably the strongest of them all and is unique in that it actually cures by contact with the moisture in the air and ends up waterproof. Once cured it is rock hard, as opposed to Polyurethane sealants or caulking that cure to a rubber like flexibility. It is the adhesive of choice for fixing concrete bird baths or attaching the top row of masonry on a retaining wall. It will adhere to a moist surface, if you work it into contact

with the surface, but it is harder to work with in these circumstances than a thermal plastic designed for wet conditions. It is my choice for most things although it costs a bit more and has the drawback that you cannot use it in weather below freezing.

Getting something to stick to asphalt based materials like roof shingles or asphalt & gravel flat roofs is a special problem. Generally we use a product specifically labeled as PLASTIC CEMENT FOR ROOFING although at least one Polyurethane product is formulated specifically for roofing use.

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