

Concrete Mixing

Mixing bags of concrete isn't complicated. You add some water, stir it up and pour it out. But to get the most strength from the concrete, you have to recognize when it has just the right amount of water mixed in. Too little water and the particles in the mix won't stick together. Too much water weakens the concrete. In this article, we'll show you what the perfect mix looks like. We'll also show you a mixing technique that will ensure thoroughly mixed concrete with a minimum of effort.

For most small jobs around the home, bagged concrete mix is the most convenient and least expensive way to go. You can use it for fence post footings, deck footings and even small concrete pads. For jobs requiring more than about 30 bags, consider ordering "ready-mix" concrete from a truck instead.

Sixty- or 80-lb. bags of concrete mix are readily available at home centers, lumberyards and hardware stores for \$3 to \$6 per bag. Don't confuse concrete mix with sand mix or mortar mix. They don't contain the aggregate (stones or gravel) that's necessary to make a pour thicker than about 3/4 in. You're likely to find more than one kind of concrete mix on the shelf, including "fast setting," "high early strength" and "fiber reinforced." But for most jobs, standard concrete mix is fine. Read the recommendations on the bags or check manufacturers' Web sites to find out if one of the special mixes would work better for your project.

Whether you hand-mix concrete in a plastic tub, homemade mixing tub or wheelbarrow, the technique is the same. However, it's easier to move and dump concrete that's mixed in a wheelbarrow. For larger jobs, you could rent a mixer (\$35 per day), but it may be more economical to simply order ready-mix concrete. In addition to a mixing container, you'll need a sturdy hoe and a large bucket as well as a stiff-bristle scrub brush to clean the equipment. Wear waterproof gloves and safety glasses because the cement in the concrete mix is caustic and can burn skin. Wash it off with water if it gets on your skin.

A Word for the Novice

It's tempting to just squirt water into the dry concrete mix with a hose and mix up a soupy batch of concrete. After all, it's quicker and the runny concrete is easier to pour. The trouble is, soupy concrete is only about half as strong as a proper mix and is more likely to crack. That's why we recommend spending a little extra time measuring the water into a bucket first, and adding only as much as is needed. Even though the thicker mix is a little harder to place, it'll be worth the extra effort.

Use a sturdy wheelbarrow to mix your concrete. And make sure it's on a level surface. Brace the wheelbarrow with your knee when you're mixing from the side.

One of the most common mistakes beginners make is to add too much water and end up with concrete that's thin and soupy. Here are a few tips to avoid the problem. First, pour a measured amount of water into the mix from a bucket rather than squirting it in with a hose. Continue mixing for a few minutes after all the water is absorbed because the concrete will often get soupier as you mix. If you add more water right away, it may end up runnier than you'd like. Finally, keep at least a few cups of dry concrete mix handy just in case your mix gets too thin.

A hoe makes a great mixing tool. A flat shovel or spade works too. Whichever you choose, it's best to add the water to one end of the wheelbarrow or mixing tray and pull the dry mix into it a little at a time. This method ensures that all the dry particles are completely wetted. Otherwise, mix in additional dry mix or water until you get the right consistency.

Remember to clean your equipment right away. Once the concrete hardens, it's a bear to get off. Scrape excess concrete from the wheelbarrow and pile it on a piece of plastic. If it's a big pile, break it up into manageable chunks before it fully hardens. Dump the rinse water in an inconspicuous corner of your lot (it can kill grass). You can even dig a depression to contain the water and then cover the residue after the hole drains.