



Clay Drying Issues

Fast drying causes cracks

Clay shrinks as it dries. If it shrinks too fast it is likely to crack.

Uneven thickness encourages cracks

Thinner parts will dry quicker than thicker parts and thus will shrink quicker than thicker parts. The different rates of shrinkage encourages the clay to crack.

Delay Drying

If your project has uneven thickness with some parts thicker than other parts you should slow the drying by covering it however long it takes to allow it to dry uniformly. A plastic bin or sheet of plastics works well for this.

Accelerate Drying

Anything you do to speed up drying increases the chances your project will crack. Applying heat is especially risky unless you can engineer some way to apply it uniformly. A fan to move air works well but instead of using it to blow air at the project use it to draw air from the project. This will wick the moisture away and doing so encourage the project to dry evenly.

Moist clay can explode in the kiln

If there is any residual moisture in the clay when it is fired in the kiln that moisture will expand as the temperature increases. That expansion can cause the clay to explode in the kiln leaving a massive mess that needs extensive cleaning – especially around the kiln elements. It's not uncommon to need to replace all the kiln elements after a clay load explodes in the kiln.

Kiln Candle or Kitchen

If you think the clay is still moist you can steam out the moisture by introducing a “candle” segment in the kiln firing schedule. In the first segment raise the temperature to 250F (120C) and hold at that temperature for however long is needed to steam out any residual moisture. Leave the kiln lid open a couple of inches (about 5 cm) to allow moisture to escape. If you hold a mirror up against the opening the escaping moisture will fog the mirror. Routinely check until it stops fogging - then program the kiln to complete the firing.

That works - but moisture is bad for kilns. A better way to steam out moisture is to instead use your kitchen oven with the door slightly open to allow moisture to escape.