

Kiln Corner

The Kiln Shelf

by Arnold Howard

Photography Courtesy of Paragon Industries, L.P.

Though Arnold Howard works for Paragon Industries, L.P., the information here applies to all brands of glass kilns. Feel free to send him questions for this column no matter what brand of kiln you own.

How does one remove glass that sticks to bare areas of the kiln shelf?

Place the shelf on a clean surface. Wearing clear safety glasses, hold a putty knife at a sharp angle against the edge of the glass. Lightly tap the putty knife. The glass should come off. Recoat the shelf.

The glass may gouge the shelf. You can sometimes smooth out a small, shallow gouge with several applications of kiln wash. Then fire the shelf to about 800°F (426°C) and sand smooth. This is only a temporary fix. For future firings, make sure the kiln wash is thick enough to protect the shelves.

Can an imperfection in the kiln shelf cause glass bubbles?

A warped shelf can cause bubbles. Air in the low area of a shelf will expand and may try to escape from under the glass, forming a bubble. Lay a straightedge across the shelf and look for low spots. If you find one, try firing the shelf upside down. Also, prefire the shelf after applying kiln wash or glass separator. Moisture released from the coating can also cause bubbles.



Shine a flashlight in a dim room along the shelf to see small cracks in the kiln wash. Cracks are easier to see in side light.



Place short posts between the shelf and a sagging mold to reduce shelf breakage.

I have been making slumped wine bottles. I first flatten three bottles. In the next three firings, I put one bottle mold in the middle of the shelf with one of the flattened bottles on top. Today I took the 21" round shelf out and saw a crack across the middle of the shelf. I always put the shelf on four 1" posts. Should I continue to use this shelf until it breaks completely?

I would continue to use the shelf, since you are not fusing directly on the shelf. If you are concerned that it might break during firing, support it under the crack with extra one-inch posts. It is safe to use the cracked shelf, because in this case the kiln is loaded with only one shelf, which is supported 1" off the kiln floor.

What causes a kiln shelf to crack down the center during a glass firing?

Your shelf may have cracked due to thermal shock. A heated mass on the center of the shelf can crack the shelf if the kiln is cooled too rapidly. That is why it is a good idea to place small posts between the kiln shelf and a slumping mold.

FLOW

Arnold Howard writes instruction manuals and advertisements for Paragon Industries, L.P. His hobbies are glass fusing and karate. He also enjoys studying history and watching classic movies. You can reach Arnold at ahoward@paragonweb.com with questions for future columns. Sign up for his kiln newsletter at www.paragonweb.com.

© Copyright 2013 by The Flow.
All rights reserved.