A Short Guide and Test Results for Using Resbond 989 Ceramic Adhesive

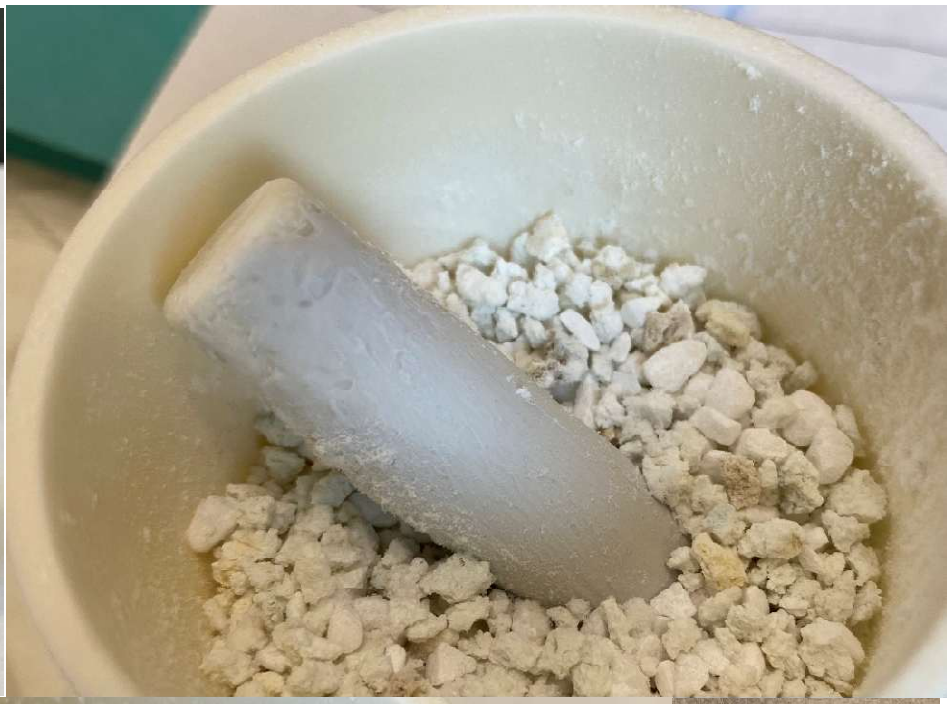
Guide for Sealing Two Crucibles or a Crucible Cap

- Clean the surfaces first.
- Use a C-clamp or any suitable clamp to hold the two objects. Do not apply adhesive to the intersection between the two crucibles.
- Apply a thin layer of thinner first. Then, use a brush to apply the ceramic adhesive. Make sure the adhesive is uniform (with no large blobs or textures).
- Wait until this layer dries (~30–60 min).
- Repeat the process and apply two more layers.
- Wait until the outer layer dries (~1 hr).
- Place in a furnace at 90 °C for a minimum of 2 hours.

Resbond 989 Ceramic Adhesive Test with V2O5 flux

Test 1: Two small crucibles with V2O5 flux

- Sealed with one coating using only ceramic adhesive, applied with a wood stick.
- Crucibles were clamped by hand (not very stable).
- Sealed, placed in furnace, fired at 90 C for 2 hr, then at 900 °C for 10 hr (test sample firing temperature).
- No cracks after firing, but flux leaked out from the sealing ring—not terrible.



Test 2: Two small crucibles with V2O5 flux

- Sealed with three coatings using ceramic adhesive and thinner, applied with a brush.
- Crucibles were clamped using a C-clamp.
- Sealed, waited ~30 min to 1 hr between each layer, then placed in furnace and fired at 90 °C for 2 hours, followed by 900 °C for 10 hours (test sample firing temperature).
- No cracks after firing. Flux leaked from the original crucible, not from the sealing point.
- Can be broken from the middle without damaging the crucible. The layers of coating are visible, but the seal remains very strong.