

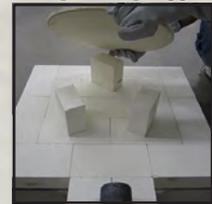
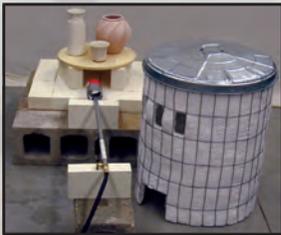
## BRACKER'S PORTABLE FIBER RAKU KILN

The Bracker Raku Kiln is a lightweight and portable design for firing ceramic pieces in your own backyard. The kiln we make today was designed by Bill Bracker in the early 1970's utilizing the technology of ceramic fiber. The kiln is made by lining a cage of wire fence material and a metal garbage can lid with one-half inch thick fiber blanket. The fiber is then rigidized with a mixture of sodium silicate and water. The use of the fiber allows the ceramicist to have the insulating qualities of 2 1/2 inches of soft insulating firebrick, yet it is light enough that anyone is able to pick it up. A complete raku set-up would include the kiln, a burner, a propane tank, a pad of soft fire bricks (or an electric kiln lid or base), a posted shelf for inside the kiln, and tongs, along with the user-provided metal tub for water, a metal bucket or can for the raku tongs (which can be very hot after use) and a metal garbage can (with a lid) with reduction material. Setting up involves laying out the pad, posting the shelf on the pad, setting the pieces to be fired on the shelf, placing the kiln over the shelf and pieces, attaching the burner to the tank, placing the burner in front of the kiln's burner port, and lighting the burner.



### A few things about firing:

First, firebricks provide an excellent way to post the first shelf. Two of the firebricks included with a raku kit have been cut in half. Use three of the cut half firebricks (2 1/2" x 4 1/2" x 4 1/2") in a triangular formation, with a "point" of the triangle exactly opposite of the burner port, which will baffle (or circulate and mix) the flame and heat from the burner. Second, the kiln's atmosphere is easily controlled during the firing to modify the amount of oxygen your kiln load receives. The kiln is equipped with venting (or peep) holes directly above the burner port. These can be left open or plugged to oxidize or reduce the firing atmosphere. A bag of fiber scraps have been included with your kiln and can act as excellent peep hole plugs for this kiln. Third, the included burner is not a forced-air burner, so a good supply of oxygen to the burner head is imperative. The tip of the burner should be approximately 1/2" to 1" outside of the kiln, but you can also control the atmosphere and speed of firing by moving the burner slightly towards or away from the kiln. Initial firings in a cold kiln should take about an one hour and successive firings should take approximately 45 minutes, depending on the glazes you might use and how many pieces you are firing (a tightly-packed kiln load could increase the firing time).



### Miscellaneous commentary:

The kiln is shipped with a bag of shredded paper inside. Not only does it provide crush resistance during transit without adding excessive shipping weight, but it can also be used as reduction material for your first firing. Also great reduction material: leaves, sawdust, excelsior, hamster/gerbil bedding, and pine needles. Your kiln was also packed with styrofoam packing peanuts. Do NOT use these for reduction material. In most cases (when you aren't using commercially available liquid raku glazes), raku glazes should be mixed dry, then prepared with water as needed for each firing session. This is particularly important in glazes with a high content of gerstley borate. Safety is of utmost concern when raku firing. Make all participants and spectators aware of the open flame and the layout of the raku set-up so that no one gets hurt. Also make them aware of the flurry of activity that will occur when the firing is complete and the pots are moved to the reduction material or water. A "dry run" of this is helpful in choreographing duties and requirements of the participants as well as making sure that reduction material and water is in a convenient location. An extra bucket of water on hand for safety is also recommended. We encourage you to experiment with how regular low-fire glazes work in a raku firing. Some will work great and some won't, and you can only find out by testing. Educational info on the back of this flyer is printed in black and white for easy duplicating for student handouts. Please feel free to copy, with appropriate attribution.



### Options:

SELECT: Raku Tongs (Kemper RK37 without teeth or RK45 with teeth) - no change in kit price  
 SELECT: Burner - 100,000 BTU burner is standard (SB kit). Upgrade to a 500,000 BTU burner for just a little more (LB kit)

**Components of the raku kit are also available individually.**

#### BRACKER'S RAKU KIT SB

*The standard raku kit, for use with a 20-40# propane tank*

- 1 Bracker's Raku Kiln
- 1 Red Dragon Propane Burner (100,000 BTU's)
- 1 Case (25 per case) of 2600°F Soft Insulating Firebrick
- 1 15 1/2" Round High Alumina Kiln Shelf
- 5# Crackle Raku Glaze
- 1 Specify either Kemper RK37 or RK45 Raku Tongs
- 1 Pair Leather Welder's Gloves

#### BRACKER'S RAKU KIT LB

*For use with a 40# propane tank or larger  
 \*500,000 BTU burner replaces 100,000 BTU burner in this kit\**

- 1 Bracker's Raku Kiln
- 1 Red Dragon Propane Burner (500,000 BTU's)
- 1 Case (25 per case) of 2600°F Soft Insulating Firebrick
- 1 15 1/2" Round High Alumina Kiln Shelf
- 5# Crackle Raku Glaze
- 1 Specify either Kemper RK37 or RK45 Raku Tongs
- 1 Pair Leather Welder's Gloves

**Bracker's Good Earth Clays, Inc. • 1831 E 1450 Rd • Lawrence, KS 66044  
 (888) 822-1982 • www.brackers.com**

# Bracker's Raku Firing Safety Tips

## DO

- Follow all directions given.
- Wear long pants and long sleeves.
- Tie back long hair.
- Pay attention to the activity going on around you.
- Take a good look at the set-up and make mental notes of locations of safety water, hot spots, and any road blocks.

## DON'T

- Don't wear excessively loose or baggy clothing
- Don't wear dangly jewelry
- Don't wear open toe or open heel shoes
- Don't stand in the way during the reduction process.
- Don't get distracted during unloading.

*Usually there is a vent on the opposite side of the kiln from the burner. When Bill Bracker designed his Raku kiln (which we still make, sell & use here), he chose to place the vent holes on the same side of the kiln as the burner port for safety. He had seen too many people walk too close to the kiln and get burned by the flame shooting out the vent holes. Placing them on the same side as the burner port diminishes the possibility of this type of burn, but it doesn't guarantee absolute safety. Common sense, awareness of surroundings and communication are key in Raku Firing safely.*

---

## History of Raku

- Began approximately 400 years ago in Japan.
- Result of high demand for roof tile following natural disaster. Tiles were removed from the kiln with tongs while still hot and did not break.
- Aquired the name "Raku" from a gold seal granted to Japanese potter, Chojiro, which bore the ideograph raku.
- The written character for the word raku comes from a pleasure pavilion in Kyoto named Ju-raku-tei. Chojiro and his workshop had made roof tiles for this pavillion.
- Prior to acquiring the name "Raku" ware was referred to as "now ware" or "Kyoto ware."
- "Raku" (translated freely) means enjoyment, contentment, pleasure, and happiness.
- The traditional Raku teabowl form was typically handbuilt and not round.
- Raku bowls were favored by tea connoisseurs - the tea tasted better.
- Highly grogged & porous clay body used for raku made an excellent insulated container for hot tea.
- Two traditional categories: Red Raku & Black Raku.
- Red Raku made from Earthenware, glazed with a creamy clear, fired quickly to a low temperature and removed from kiln. The red color was achieved by covering clay with an ochre slip prior to glazing.
- Black Raku was made from stoneware clay, decorated with a black glaze, and fired higher and slower than red raku, but still cooled rapidly.
- Bernard Leach was an Englishman who studied pottery in Japan. While in Tokyo, he became a 7th generation representative of the Kenzan tradition and brought the tradition back to England.
- Warren Gilbertson & Hal Riegger - Americans working in Raku in 1940s and 50s.
- Paul Soldner - popularized Raku in the United States in the 1960s.
- William Bracker constructed and premiered the first fiber Raku kiln in the late 1960s/early 1970s.

## Modern Raku

- Expansion from Teabowl to many forms.
- Process now done in brick, fiber or electric kilns.
- Salt Raku - Can be introduced into the firing chamber during firing (not in fiber or electric), or fumed in a postfiring phase.
- Fuming - the application of metallic salts to the surface of your ware. Usually achieved by spraying a solution of silver nitrate, stannous chloride or other soluble salts onto your piece after firing then using localized postfiring reduction and/or water-cooling techniques to control outcome.
- Sagggar firing - a method of stacking ware in a kiln to isolate the ware from the potential negative results of contact with either the fuel itself or the flames. Can also be used to create intense atmospheric conditions by loading the sagggar with wood, sawdust, seaweed, and other organic materials etc.
- Horsehair Raku - strands of hair are applied to the surface of a hot pot. As the hair burns, it leaves a smoked trail and pattern. Horse hair is ideal because of its length and thickness.
- Naked Raku (also known as slip resist) - a technique in which a thick slip with a high concentration of Alumina Hydrate is applied to the entire piece. As the slip dries, it cracks and curls. During the firing and reduction period, smoke hits the bare parts of the piece. After cooling, any remaining slip is scrubbed off revealing the smoky pattern left on the piece.
- Reduction materials - sawdust, shredded paper, newspaper, leaves, pine needles, animal dung, wood chips, excelsior, etc.
- Steve Branfman, Robert Piepenburg, Tim Andrews, and other authors helped to expand popularity of Raku and make it accessible to many.
- Raku recipes readily available in books by authors listed above, and in other books.
- Raku glazes made by commercial glaze mfgs.
- Traditional low-fire and high-fire glazes used in Raku with a Crackle white/clear glaze to cover.

*Much of this information has been compiled from [Raku: A Practical Approach](#) by Steven Branfman and [Raku Pottery](#) by Robert Piepenburg.*