To insulate this kiln I use Fiberfrax which is a spun alumina-silica ceramic fiber product, a trade name of the Carborundum Co. Fiberfrax comes in a wide variety of useful sizes and shapes. I use 8# density, 2300°F service temperature, 1" thick Fiberfrax. This comes in a 25 foot long roll which is 2 feet wide. There are other trade names that are good, like Ins-Wool, Cera-felt, and others. If you have an off-beat supply, ask other craftsmen how it holds up before using it. I purchase my ceramic blanket from Jack Brennan listed below:

Hunter Refractories, Inc., Jack Brennan, 36 Pope Road, Holliston, MA 01746 (1-800-429-3673)

Again I get a full roll which costs somewhere between \$100.00 and \$200.00 depending on supply and circumstance. It might be possible to purchase smaller amounts of the material, but I never have. Perhaps a ceramic supplier might be helpful here. The four pieces of frax you need for this kiln are shown below. The only one you need to attach is the door frax as shown above. The others are held in place by compression and the element assembly.



The tools used for Fraxing a project are very simple.

- 1. A respirator is required. Your lungs must be protected from the dangerous ceramic fibers.
- 2. A mat knife with a new blade. Frax cuts easily, like a pad of felt or foam rubber. And it shapes easily with a sharp mat knife. A dull blade will only damage the frax pad by ripping-- a sharp blade cuts.
- 3. A rasp with a coarse tooth as might be used for wood. This is used to shape the edges.

The next order of business is to install the element. This bead annealer uses a 120 volt x 6 amp (720 watt) element. This can be purchased from Joppa Glassworks, item #E120-06-205 at \$25.00. The element has internal mulite rod support (2 pieces 11" long) which can be purchased from Joppa Glassworks as well. It is sold in lengths of 30" at a cost of \$12.65 each. This is held in place with "Donut" style insulators, also sold by Joppa Glass at a cost of 50¢ each. The loose assembly is shown below in figure 12. And it is shown installed in place in figure 13.



