

BISQUE FIRING PROCEDURES

Technical Tips And
Product Information

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BISQUE FIRING

All types of clay will be bisque fired

- This is a 1000°C firing.
- The first firing for all clay (bisque firing) is very slow and conservative so as to harden the clay and change it into a ceramic (fired) material that won't dissolve in water – you must have achieved at least 600°C for this to happen.
- Bisque firing is generally done at approximately 50-100°C per hour depending on
 - (1) Size of the forms
 - (2) thickness of the forms
 - (3) amount of joins in the forms
 - (4) assured dryness (moisture content) of the forms.
- The firing program should suit the poorest made piece of pottery in that firing – never create a program to suit the best piece or the average of all the pieces to be fired.
- In a bisque firing, the pottery items do not soften and attach themselves to each other – you can pack the kiln with pieces of pottery touching each other without any worry.
- When packing, don't stack too much pottery on top of other items or against the walls of the kiln.
- Don't stack clay/work too closely (i.e. lots of tiles touching each other) in the kiln as it will be difficult for the kiln heat to permeate the thick stack of clay, and could cause cracking due to uneven heating.
- If you don't have enough work to fill a kiln, make sure you still put kiln shelves into the kiln – just pack the space with lots of gaps between the work. Do not pack a kiln that has only a few pieces of work sitting on the floor of the kiln, and the rest of the kiln empty – it won't fire evenly.
- **NOTE:** the heat radiating from electric kiln elements will travel upwards in the kiln (hot air rises), therefore the bottom of an electric kiln is often cooler than the top. When packing an electric kiln, make the first shelf sit approx. 10cm from the base of the kiln allowing heat to permeate the lower areas so they aren't cooler than the top.
- When packing a kiln load of tiles, do not place shelves less than 5cm apart. Tightly packed shelves do not allow the heat to permeate the stack and results in underfiring or uneven firing. Overly tight packing can also cause overfiring problems during the final stages of a firing because the shelves/tiles are so closely packed they hold their heat at top temperature, and give the firing the equivalent of a long soaking time.