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Books



Pottery crafts offer a wide range of books from our showrooms. Full details are available on our web site and in the pricelist.

NOTE: Books go in and out of print at any time and this may affect availability

Clay and glaze compatibility chart

Body Description	Clay body reference	Biscuit firing temperature range firing range	Compatible glaze
Raku Bodies suitable for raku 950°C- 1060°C (special high expansion glaze required)	P1361, K129, P1480		950°C – 1000°C Cone 08 – Cone 04
Earthenware Bodies maturing between 1050°C –1100°C	P1311, P1331, P1626, P1564, K112, K130, K133, K134	1600 C – 1100°C Cone 04 – Cone 03 (except P1564 – 1020°C max -Cone 06)	1000°C – 1100°C Cone 06 – Cone 03
Earthenware Bodies maturing between 1120°C-1180°C (can be once fired with glazes maturing at 1140°C)	P1230, P1240, P1260, P1321, P1341, P1361, P1401, P1521, P3150, PW141, K120, P1483, K130, K133, K134, P1486, P1224, P1225, P1226, P1228, PW111	1120°C – 1180°C Cone 02 – Cone 4	1000°C – 1140°C Cone 04 – Cone 01
Stoneware (Oxidised) Bodies maturing between 1220°C-1280°C	P1530, P1551, P1370, P1515, P1516, P1395, P1565, P1566, P1483, P1401, P1230	960°C – 1020°C Cone 07 – Cone 05	1200°C – 1300°C Cone 5 – Cone 10
Stoneware / Porcelain (Reduction) Bodies maturing between 1220°C-1280°C	P1361, P1546, P1565, P1566, P1551, PW121, R3012, R3014 , P1487	960°C – 1020°C Cone 07 – Cone 05	1200°C – 1300°C Cone 5 – Cone 10
Stoneware & Porcelain (Oxidised / Reduction) Bodies maturing between 1220°C-1280°C	P1221, P1341, P1370, P1395, P1401, P1515, P1516, P1530, P1546, P1551, P3158, R3060, PW131, K129, K130, K148, P1215, P1216, P1217, P1218, P1227, P1480, P1481, P1482, P1484, P1485, P1488, P1489	960°C – 1020°C Cone 07 – Cone 05	1200°C – 1300°C Cone 5 – Cone 10
China Body maturing between 1230°C-1250°C	P1211, PW101	1180°C – 1220°C Cone 4 – Cone 6	1040°C – 1100°C Cone 05 – Cone 02
Stoneware (Once fired) (suitably glazed at leather hard stage) Maturing between 1220°C-1280°C	P1401, P1341, K129, P1488		1220°C – 1280°C Cone 6 – Cone 10
Porcelain Maturing between 1280°C- 1350°C	R3014,	980°C – 1020°C Cone 06	1280°C – 1350°C Cone 9 – Cone 13

Mould making – Glossary of terms

Model

The original shape intended for reproduction. Remember that the actual piece produced will be smaller due to shrinkage during firing. Models are best made of clay or plaster

Block mould

Also known as the master mould, the block is a negative of the original model and is made in plaster

Case mould

A positive reproduction of the original model, that then gives a duplicate of the original model in plaster form. The case may be in several parts, depending on the complexity of the mould.

Working block

Identical to the block mould, but taken from the case mould in order to preserve the size and detail of the model as contained in the block mould

Working case

A case mould taken from the working block to avoid wear and tear on the case mould

Working mould

Taken from the working case. This mould is then used for casting actual pieces. The life of a working mould will vary depending upon the amount of detail in the mould and also the type of slip used for casting, but on average 40-50 castings can be achieved

Mouldmakers size

- Mix half/half with hot water. Allow to cool; brush on; wipe off with damp sponge. Apply 3 coats, allowing to dry between coats.

Care of moulds

The working life of a mould depends greatly on the care with which it is used. The following simple points should be noted

- Never removed dried slip with a knife or sponge as this will remove details from the mould
- Allow excess slip to dry to leather hard and then peel off
- Dust the inside of the mould with a soft brush to remove any waste materials

Use of mould makers size (P3384)

Mould makers size is normally used as a release agent when pouring plaster onto plaster, it can however be used on the seams of working moulds to assist in the separation of the individual parts. It must never be used on the working surface of the mould as this will either stop the slip from casting or result in uneven and poor results

First cast

When using a mould for the first time it is always advisable to lightly sponge the inside of the mould to remove any small particles of dust, thus allowing the slip to come cleanly away from the mould when cast

Always use rubber bands or mould straps according to the size of the mould being cast. For larger moulds (eg patio pots or Christmas trees for which we could recommend mould straps) there is a tremendous amount of weight contained within the mould

Basic casting techniques

- Always ensure moulds are dry and clean
- Check for a good tight fit between mould parts
- Before assembly moisten seams to prevent tearing when removing cast pieces
- With previously used moulds, remove all clay debris before assembly
- When filling the moulds with slip, try not to pour directly onto the same spot
- Fill the moulds at a steady rate to avoid swirl marks and pinholes (common faults when pouring too fast)
- Casting time is important and is governed by many factors such as size of mould, type of body, consistency of slip. As a guide a casting time of 20 minutes is required for earthenware (such as P1616, R3019, R3200), 3-5 minutes for bone china slip
- When emptying slip from mould use an angle of 30-40° to drain thoroughly (a common fault is to tip mould vertically. This will cause small droplets to form, sometimes referred to as artexing)
- Carefully remove the cast piece approximately two hours after pouring the slip into the mould, depending on the size of the mould and the amount of slip used
- When the cast has dried to leather hard or greenware state, remove the seam with a suitable fettling tool then smooth the seam lightly with a wet natural sponge to avoid removing any details

Mould making – suggested starting items

- Buckets
- Jugs
- Two large containers for clean water
- 2 dustbins (plastic) - one for each type of plaster
- soft soap (often called 'size' P3384)
- brushes
- a sponge (natural sponges is preferable)
- Ball clay (plastic)
- Tools for modelling
- Tools for mould work, i.e. strong knife, surform, string or cord, pallet knife and a sturdy table
- Wooden or melamine boards
- Towel



FAQs

Q. Why is my earthenware glaze crazing?

A. Mismatch of the thermal expansions of glaze & body (insufficient glaze compression).

Q. What is the difference between a stain, an underglaze and an on-glaze colours?

A. An underglaze colour is finer ground glaze stain and normally contains a frit or flux addition. An on-glaze is a fusible colour where all the constituents are melted together and finely ground

Q. Why is my red brush on glaze firing clear or brown?

A. Overfired or fired too slowly (min 200°C / hr min)

Q. How fast should I fire?

A. 60oC - 90oC / hr up to 400°C then 130°C – 150°C thereafter

Q. Why does my work keep blowing up in the kiln?

A. The ware was too damp (ideally>1%) and fired too quickly during the initial stages of the firing

Q. What is the difference between Earthenware & Stoneware?

A. Earthenware is porous and typically white firing. Stoneware is semi or vitreous and darker firing

Q. Can I use Earthenware brush on glazes on Stoneware?

A. No – the thermal expansion is not suited to a stoneware body and likely to craze

Q. What raw materials and oxides make a glaze not food safe?

A. Lead, Cadmium, Selenium, Arsenic, Antimony, Barium, Zinc, Nickel, Cobalt. NOTE that limited additions of these compounds are permitted if introduced in the correct form. SEEK ADVICE

Q. Can I mix glazes (i.e. yellow and blue to make green)?

A. Yes – certainly with pastel coloured glazes. A TRIAL would be recommended before commencing

Q. Do I need 3 phase electrical supply to run a front loading kiln?

A. Not necessarily, the majority of Potterycrafts kiln are designed to operate on either supply. – CHECK YOUR electrical installation

Q. What is Pinholing?

A. Pinholing is caused by air entrapment or body impurities

Q. What is Thermal Shock?

A. Ware heated or cooled too quickly and the body cracks or spilt as a result

Q. What is the difference between Tin and Zircon opacified glazes?

A. Tin glazes are blue white in colour, offer a broader firing range than Zircon glazes and require approximately half the oxide addition when compared with Zircon

Q. Why does my Kiln smell during the first stages of the firing?

A. This is typical, this emanates from moisture, the body organics and glaze binders. We strongly recommend that the kiln is used in a well ventilated room / area

Q. At what temperature should I fire the kiln to for the first firing and following element replacement?

A. 1100°C – this will form a protective coating on the surface on elements and conditions the brickwork to the firing cycle

Q. At what temperature can I open my kiln after the firing firing cycle?

A. Not above 100°C – CHECK your controller

Q. An element has come out of its groove – what should I do?

A. Dependant on the severity the element can be pushed back in and re-pegged

Q. The bricks on my kiln are cracking?

A. These are inevitable, and are referred to as expansion / contraction cracks which reflect the firing process. They do not affect the firing performance and are best left

Q. Can I fire the Kiln unattended?

A. No. As with all electrical equipment it is advisable to be present during the critical stages of the firing .



Kiln questionnaire

> Indicate the nature of this application

- Kiln enquiry
- Kiln order

> Type of kiln required

- Front loading
- Top loading

> Model

Controller

Please quote the kiln model reference number along with the applicable controller option.
Important: Please ensure your electricity supply is adequate for the kiln you wish to order.

> Site information

Entrance to be used

- Main
- Back
- Service
- Other (Please indicate)

Surface from vehicle to building

- Tarmac
- Grass
- Concrete
- Gravel
- Other (Please indicate)

On which floor will the kiln be located?
.....

Number of steps

Number of turns

Size of steps x x
depth (cms) height (cms) width (cms)

Is there a lift available?

- Yes
- No

Does it stop at the correct floor?

- Yes
- No (Please specify)

Maximum lift loadkg/lbs

Dimensions of the smallest passageway through which the kiln must pass

Are you prepared to remove doors?

- Yes
- No

Passage width when door(s) removed(cms)

Indicate floor covering of:

Steps

Corridor

Final kiln location

Any other obstructions: (you may find useful to walk the route)
.....

Include further information overleaf:

Office use only

Customer ref: Our ref:

Daytime phone no:

> Customer information

Name:

Company:

Address:

.....

.....

.....

Postcode:

Daytime phone no:

Invoice address (if different from above):

.....

.....

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Postcode:

Daytime phone no:

> Optional extras:

If you have chosen a kiln/controller package, the thermocouple and controller are indicated in the price.

You may wish to consider some optional extras

	Add to my order	Send me information	Office use only
Kiln furniture set	<input type="radio"/>	<input type="radio"/>	
Spare element set	<input type="radio"/>	<input type="radio"/>	
Optional overfire protection	<input type="radio"/>	<input type="radio"/>	
Thermocouple	<input type="radio"/>	<input type="radio"/>	
Refer to kiln purchasing basic kit only			
Kiln cage	<input type="radio"/>	<input type="radio"/>	
Refer to kiln accessories			
Build-on-site quotation	<input type="radio"/>	<input type="radio"/>	

Important notes overleaf:



