

# THE BASICS OF CLAYS

*In order to determine which clay is best for your particular project, it is helpful to understand the range of different characteristics a clay might have. It is also good to know ahead of time whether you intend to use the clay primarily for modeling and handbuilding or for pottery and wheel work.*

## CLAY CHARACTERISTICS

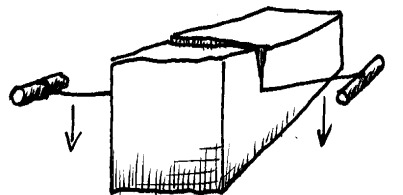
When choosing a clay, you will find that each clay has its own unique texture and finish. The texture of the clay you choose generally correlates with the type of object and size of object you are working with. When producing a smaller or finer-detailed piece, you might consider a smoother clay with little grit or sand. While, for larger hand-built pieces where the degree of detail is less or where you might be adhering varying thicknesses of the clay to an armature or support, you might want to use a clay with increased sand or grit content. This grit is often called grog. For these reasons, clays are available in a variety of texture ratios, relative to the size and type of project you are working with.

How soft or hard a clay is and what kind of shrinkage value it has, also correlates to your particular project needs.

If you are working with small children, for instance, you might want a relatively soft clay. On the other hand, if you are working with older children or adults, they will be better able to handle a firmer clay, which is also good for fine details.

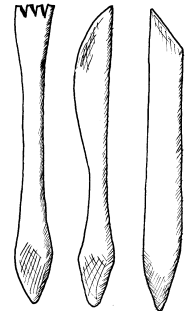
The shrinkage-value of a clay will also alter the final size of your piece once dried and fired. While experienced potters are often able to compensate for this occurring, if you are unfamiliar with the shrinkage value of your clay, it might be advisable to use a clay which has little shrinkage.

The colour of the clay is a matter of personal preference. Buff clays are probably the most familiar colour to most people and are generally finished with



cutting clay with wire cutter

an opaque glaze or paint. Redder clays are often used in projects where you desire a terra-cotta look, and where it is not necessary to glaze the finished piece. White clays are useful in situations where you desire a special effect, such as with a transparent glaze, or if you are painting the piece as if it were a painting on primed canvas. You can utilize the colour of your clay as a way to change the effect of your glaze or final paint application.



wooden tools

Finally, clays are also characterized by whether they are a low or high-firing clay. High-fire clays are often more durable and useful for a finished product which will be exposed to repeated or everyday use. High-fire clays can often be a little trickier to work with technically, so in general, for school or hobby use the low fire clays are more appropriate and forgiving. Unfortunately, over time low-fire clays may not withstand the wear and tear of repeated handling, or exposure to high temperatures such as with oven or bake ware use. Glazes are also categorized by firing temperatures. Understanding glazes involves more advanced knowledge and consequently, we recommend consulting further references on glazing, including books and professional potters, so that you can learn how to do glaze tests.

## TRADITIONAL CLAYS

### *Modeling & Pottery Clays*

Opus currently stocks both modeling and pottery clays for kiln firing. In general, modeling clays are primarily intended for handbuilding purposes, while pottery clays are intended for wheel work, sculpture and some handbuilding. While some modeling and sculpture clays can be used for pottery wheel work, special care must be used due to the grog (particles and grit) that are mixed into the clay to provide extra strength when it is fired. Extra water, and a wet chamois can aid in reducing the amount of friction that results when working with a piece of modeling clay on a pottery wheel.

# THE BASICS OF CLAYS

In our selection of kiln fire clays we currently stock AMACO moist pottery in different colours and sizes. These clays are multi-use, oriented towards projects which might entail everything from hand-building to wheel-throwing. The texture is mid-range and shrinkage is moderate. These clays require kiln firing and one of their distinct advantages is that they can be fired at a range of temperatures.

The LAGUNA brand of modeling and sculpture clays are differentiated by more specific properties, and therefore, preferable when you desire increased control over the characteristics of your clay. For instance, LAGUNA modeling clays are smooth and low-firing. They are well suited to both hand-building and wheel-throwing of smaller pieces. They are also available in different sizes and colours.

LAGUNA sculpture clays are medium to coarse in texture, and are formulated for low-shrinkage. These clays are useful for larger hand-built pieces and some wheel-thrown work when appropriate care is taken. They can be fired at a medium-range temperature, but are often fired lower for sculptural work where a range of clay thickness is a factor.

*Tip: When working with coarser clays, such as modeling and sculpture clays, those with a greater amount of grog added, be sure to take extra care. This material can be rough on your hands potentially causing small abrasions. If using these clays for wheel work, caution is advised. It is best to ensure that adequate moisture is used to reduce friction.*

## Non-Kiln Fired Clays

Many of you may be aware of the variety of alternatives available to using traditional pottery, modeling and sculpture clays. Many of these clays are useful for schools and for beginning artists where the use of a kiln might be inconvenient, too complex, or costly. These clays are primarily for decorative projects as opposed to kiln fire clays, which are ideal for functional ware. Opus stocks a few different brands of non-traditional clays. Ask our staff for which clays we currently have available.

Oven-bake clays generally look and feel just like regular kiln fire clays except once dry they are cured

by baking in a regular household oven. As with all oven-bake clays including polymer clays, it is important to pre-test your oven temperature to ensure accuracy as varying temperatures will produce different results and too high a temperature may cause smoke or discolouration. After baking, your project can be used as is, or finished with acrylic paint. It is also important to seal the finished piece if you require it to be waterproof.

We currently stock Ovenscraft by LAGUNA. Once baked, it has a speckled reddish-brown stoneware finish. This clay is similar in texture to standard LAGUNA modeling clays, and is useful for smaller hand-built or wheel-thrown projects.

Alternatively, you can use air-dry clays which cure and fully harden in the air. There is no need to bake with these clays. Most of these clays will dry to a "leather hard" consistency within 24 hours depending on the thickness and will cure completely in a few days. They can be painted with regular acrylic paints, and should also be sealed if they need to be waterproof.

Currently, we stock LAGUNA Dry-Hard, AMACO Mexican and AMACO Marbled clays in the air dry clays. The LAGUNA version is similar in consistency to standard LAGUNA Modeling clays. The AMACO clays have a smooth and consistent feel, similar again to standard modeling clays. They are suitable for smaller hand-built or wheel-thrown work. Dried pieces are hard and durable.

Both of these AMACO clays have a high rate of shrinkage, so be aware that different thicknesses or pieces built over armatures may crack when drying. To avoid this occurring, it is important in general, to build pieces which have an overall consistent thickness, or to build solid pieces which you can scoop the middle out of once the clay is at the leather-hard stage. Also, as with any clay, let the clay dry naturally and do not attempt to accelerate the process.

Another air-drying clay which Opus stocks is REEVES-POOLE Self-Set Clay. This clay has a smooth plasticine-like consistency. It is very soft and easy to manipulate, great for working with younger children. It will air-dry to a bisque finish, and shrinkage is minimal. It is suited to hand-building techniques. It air-dries to a hard finish overnight, depending on the



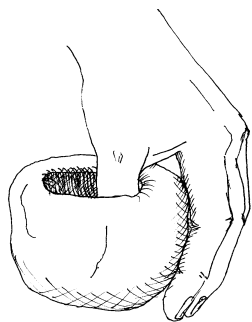
# THE BASICS OF CLAYS

thickness of the finished piece. Once set, it can be sanded smooth and painted with acrylics. For added permanency, it should also be sealed with a sealant such as acrylic medium. Like all air-dry clays it is ideal for decorative projects.

One of the considerations to bear in mind when choosing to work with non-traditional clays, is that they are generally more expensive than regular clays. This is off-set by the fact that you do not require kiln facilities or extensive knowledge of the glazing process. As a result, these clays can be a great and convenient way to introduce yourself to small 3-D projects, because you can focus primarily on the creative process. In addition, they can easily be incorporated into different types of experimental or multi-media projects.

## BASIC HANDBUILDING TECHNIQUES

**PINCH-POTS:** Depending on the desired size of your pinch-pot, start with a handful of clay to make a small to medium sized pot. Roll the piece of moist clay between your hands, until it forms a smooth and even ball. Using your thumb, create a deep depression in the ball but do not push your thumb all the way through the clay form. There should be at least a 1/2" of clay between the bottom of the depression and the outside of the ball — this area will ultimately form the base of your pot.



Keeping your thumb inside the form and your remaining fingers parallel to it on the exterior, begin pinching the sides and rotating the form at the same time. This step is

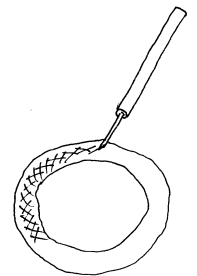
repeated continuously, to shape the walls of the pot, until the desired thickness and shape is achieved. The walls and bottom of the pinch pot should not be less than 1/4" to ensure that the pot retains its form as it dries. If the rim of the pot cracks, as you pinch and rotate it, you can add more clay to repair it or smooth it out with a damp chamois. The bottom of the pot



will form and thin out as you work. Try not to overwork the clay as it is difficult to add clay to thicken walls which are already too thin and could cause the piece to crack. This, like all hand-building methods becomes easier with practice.

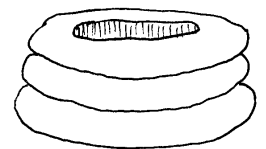
Once finished, allow the clay to dry until it is "cheese" or leather hard, i.e. when it is still moist but firm. This may require covering it with a damp cloth or damp paper towels to prevent it from drying too quickly and then leaving it to sit overnight. Once leather hard the pinch-pot is strong enough to accept any final touches such as burnishing or adding small clay appendages. Appendages can be added at an earlier stage, however, if the clay is too soft you may want to wait until it hardens somewhat. When adding clay features you must score the clay in a cross-hatch fashion with a needle tool and moisten the two surfaces which are to be attached with a wet chamois. The two pieces should be of a similar hardness. Use a wooden tool to smooth out the seams of the new join.

**COIL BUILDING:** The coils which you prepare for this method should generally be consistent in size, 1/4" to 1/2", but can be varied to accentuate different parts of a vessel form. For example, if you plan to create a vase form you can roll and form the coils so that they become increasingly smaller as you near the neck of the form. Be careful, however, that they are not thinner than 1/4" as the form will not be strong enough to hold its shape.



The coils should be spiraled one on top of the other and each opposing surface should be scored and moistened to ensure proper adhesion of the next layer. You can vary the thickness of the coils according to the desired effect or form.

The coil form can be left to dry just as it is or when it becomes leather hard it can be smoothed further, texturized or have appendages or clay decorations attached. If you plan to use the clay form to hold liquid or small particles, consider smoothing



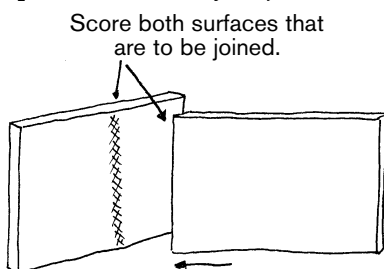
# THE BASICS OF CLAYS

the interior surfaces of the vessel. Also, if you want it to be fully waterproof further research is recommended to determine the most suitable clay and glazes to make your piece functional.

## NOTES:

**SLAB BUILDING:** Using a rolling pin, roll out various size pieces of clay until flat and no less than 1/4" thick. Measure and cut the rolled out pieces into rectangular or curvilinear forms according to the plan for your final 3-D form. Let these pieces dry until they are leather hard before you begin to assemble the form otherwise it will be difficult for them to hold their shape and support the final piece.

When ready, score and moisten all edges before you join them to ensure a proper bond. Once you join the two surfaces you should also add some moist clay to fill the seams along both lengths of the joint. Use a wooden tool to apply the clay and to remove any excess.



*TIP: Before you begin working with your clay you should knead it to get rid of any air bubbles. Do not knead it as you would bread dough as this will put air into it instead of taking it out. Instead, take a manageable size piece of clay and forcefully drop it onto your working surface several times, turning it each time to rid it of any air pockets.*



**OPUS**  
Framing &  
Art Supplies

OPUS Vancouver  
1360 Johnston St  
604-736-7028

OPUS Langley  
5501 204 St  
604-533-0601

OPUS Victoria  
512 Herald St  
250-386-8133

OPUS Kelowna  
1357 Ellis St  
250-763-3616

OPUS North Vancouver  
120 Lonsdale Ave  
604-904-0447

OPUS National  
Mail Order Service  
1-800-663-6953

*'where artists prefer to shop'*

[www.opusframing.com](http://www.opusframing.com)