

# Leadlight Products NZ – Art Glass Studio

## Glass Mosaics Made Easy

### Introduction

Creating Glass Mosaic's is a great way for the Leadlighters to develop a new skill (and passion!), as well as find a use for all those glass scraps!

The Ceramic Tile Mosaic Artist can widen the range on their pallet by use glass along side other chosen mediums. There are many advantages in using glass in your mosaics, such as the large range of available colours, the choice of transparent and opaque glass, and the colour variance that can be obtained from streaky opalescent glass. Glass is reasonably uniform in thickness varying from 2.8mm to 4mm, which makes it great for tabletop surfaces.

### Project Ideas

Glass Mosaics can be suitable for many situations. Try making a Pot-stand or Trivet, a Set of Coasters, a Table-top, a Planter pot, a Platter, a Mirror Frame or a Wall Plaque with a child's name or a number for the house.

### Process for Creating Glass Mosaic's - using the Direct Method

- Choose your design
- Draw a master pattern
- Take copies of your master pattern
- Experiment with coloured pencils or crayons if needed
- Prepare the Form
- Transfer pattern to form using carbon paper
- Cut out Glass Appliqué pieces,
- Prepare Glass Cullet
- Using adhesive, bond all the physical elements onto the form
- If you have a border on your design you will want to bond this now
- Fill the background with Glass Cullet
- Apply grout to your Mosaic at least 24 hours after the last Glass pieces have been placed
- Seal the grout with 2 coats of Grout Sealer
- Paint the underside surface of the Form

## Design

In most of my Glass Mosaic Designs I combine the techniques 'Appliqué' and 'Cullet'.

Appliqué is the term used for the 'cut to shape' pieces. I use my Oil-filled Glass Cutter to cut these shapes.

Cullet or Tesserae is the term used for the 'background fragments'. These can be triangular, square or rectangular (or a combination) in shape. The glass is cut into thin strips and then 'chopped' to shape using Glass Mosaic Cutters.

## Grout Colour Consideration

When considering colours for your project, it is important to keep your grout colour in mind while choosing Glass colours. If you want a contrasting look you may like to use a dark grout such as black against light colour glasses, or dark coloured glasses against white or light grey grouts. If you require a harmony between the grout and glass your choices will be different again.

There are many different colours in grout available. Do not be afraid to make your mosaics exciting, with the use of a different grout.

## Sourcing Your Design

There are many Glass Mosaic and other Mosaic books available now – see Recommended Glass Mosaic Books. These are the obvious place to start for more technical information as well as design ideas. Other places to source designs from are Lead lighting books, children's Colouring books, fabric, geometric designs...you can literally find ideas everywhere!

## The Pattern

For most designs I recommend that you work from a master pattern. This gives you a record of your work for future use. You may wish to take copies of your pattern using a photocopier and use some coloured pencils or crayons to try different colour combinations.

***Hint: It is cheaper and quicker to draw an idea twice than to cut the glass twice.***

When drawing your pattern you need to remember that you will have a broad grout line of 2-4mm between each piece of glass. You may wish to sketch with a Marker Pen to give you the desired line thickness. Your pattern needs to include all the appliqué pieces or physical elements such as Glass Nuggets.

## Preparing The Form

Wood – All surfaces need to be sealed with primer or undercoat. I recommend 2-3 coats of paint.

Terracotta – Seal only the surfaces that will have no grout with Plastikote Clear Acrylic Spray or a similar product. This will allow you to clean grout from the terracotta surface successfully. You will need 2-3 coats.

## Transferring The Design to the Form

Using carbon paper and your master pattern, transfer the design onto your form. This gives you a guide to the placement of your physical elements.

## Cutting the Glass Appliqué Pieces

If you are new to cutting glass it is best to consider carefully, the shapes you intend to cut with your glasscutter. If they are too intricate (curvy), or too small, you may find it difficult to begin with. If you have a particular design in mind with intricate shapes, I suggest doing a slightly easier project first.

***Hint: You will find glass fun to work with if you aim to ‘walk before you run’.***

If you have access to a Glass Grinder, you will find it useful to shape the more intricate pieces, however, it is not a necessary piece of equipment. The design you choose will dictate whether you need to use a Glass Grinder.

### **\*Health and Safety\***

**Always wear Safety Glasses when breaking Glass!!!**

## Preparing Glass Cullet

Glass Mosaic Cutters are a great tool and make this process very easy. Using your Cork-back Aluminium Ruler cut the Glass into strips.

***Hint: The size of your strip will determine the size of your cullet.  
Narrow strips = small cullet. Wide strips = larger cullet.***

Using the Glass Mosaic Cutters ‘chop’ the glass strips into triangular, rectangular or square pieces. The wheels of your cutters should be in the center of the strip. You can also use Mosaic Glass Tesserae Squares and chop these into smaller triangles or squares.

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## Placement of your Physical Elements

You will be able place your physical elements in position accurately, following the directions 'Bonding the Glass Pieces to the Form', after you have transferred your design to the form using carbon paper.  
Bond these pieces and your border first then your background Cullet.

### Filling the Background with Glass Cullet

When you fill the background areas with the Glass Cullet you may find that you need to cut smaller shapes than you have on hand, to fill the area evenly. Keep your Glass Mosaic Cutters handy and 'chop' your cullet pieces smaller to fit.

### Bonding the Pieces to the Form

I recommend using a Flexible High Strength Bond Adhesive such as Mosaic Isolastic Bond Adhesive.

In a small container mix the dry powder with the isolastic agent, adding the liquid to the powder a little at a time. The consistency should be like toothpaste. If it is too runny the pieces will not bond fast enough.

Mix only the amount you will use in the next 15 minutes.

Using a small spatula, or an ice-block stick, apply a thin even coating to the underside glass surface, place glass pieces onto the form in the desired position and press firmly in place.

You have 20-30 minutes working time, which means you can move the pieces slightly after placement.

Make sure you leave enough room for a grout line of your desired thickness.

***Hint: Be careful not to let the adhesive squeeze too high in between the glass pieces.***

Drying time is at least 24 hours so I recommend that you do not begin to grout until 24 hours after the last piece has bonded.

Wash tools and hands with water while the material is fresh.

### **\*Health and Safety\***

**Always use a Dust Mask when handling Powders!!!**

### Grouting

I recommend a grout with a latex component for increased flexibility - refer to Flexibility notes. I like to use a grout that is of industrial tiling quality. This reassures me that I can display my mosaic work in almost any situation and it will not be prone to cracking or any other weather damage.

***Hint: Disposable gloves are great for those messy jobs like grouting***

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Use a suitable size container for the quantity you will need, and pour in the desired amount of powder. Mix in the water a little at a time. The grout should have an almost crumbly consistency. If it is too wet then the grout will not remain waterproof when dry. Make sure all the dry powder is thoroughly mixed, and leave it to sit for 5 minutes.

***Hint: It is better to mix too much grout than not enough, as it is disruptive to mix more.***

Use a Rubber Grouter and apply the grout to the mosaic work squeezing it between all the joints. If your project is a 3-dimensional object you may need to apply some of the grout with your hands.

When you have coated the whole surface wash up your container and grouter, throwing away the excess.

Now you will need some rags or sponges and a bucket of water. Start with a damp rag shaped into a ball with a flat surface on one side, or a sponge, and use this to wipe off the excess grout, rinsing the rag off in the bucket of water when required. Pay particular attention to getting all the grout off the surface of the glass pieces. Make sure you do not use too much water on the rag. After all the excess is wiped away leave it to dry for about 30 minutes. There should still be smears of grout all over the glass. After the 30 minutes you can get a dry rag and gently buff off the excess grout, taking care not to dislodge any grout.

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### **Sealing the Grout**

Some Grout Manufacturers state that their grouts do not need sealing. That is a personal choice only you can make. Sealer is not cheap for a bottle but a little goes a long way.

I use an industrial strength Grout Sealer to give added peace of mind that my work can withstand outdoor elements.

Your grout must be completely dry before you apply the sealer. This will usually take around 24 hours.

Pour a small amount of Grout Sealer onto your project surface. A tablespoon should cover approximately 0.1 sq. meters (1 sq. foot). Spread this thinly over all the grout with a toothbrush, adding more if necessary. Leave for 5 minutes and then dry off any excess with a soft cloth. Apply a second coat allowing a minimum of 30 minutes drying time in between coats. Wipe away the excess again after 5 minutes.

### **Painting the Underside Surface of your Project**

If your project is a Mirror Frame or a Trivet you may wish to finish your project by painting the underside with a paint of the same colour as your grout.

## Recommended Glass Mosaic Books

*Mosaic Mirrors, Platters and More*

By Christine Stewart

*Stained Glass Mosaics*

By George W. Shannon, Pat Torlen and Greta Torlen

*Mosaic Table Art*

By Carolyn Kyle

## Tools

Drawing Equipment-

Pencil, eraser, ruler, graph paper, tracing paper, carbon paper, scissors

Oil-filled Glass Cutter

Breaking/Grozing Pliers

Aluminium Cork-back Ruler

Glass Grinder

Safety Glasses

Dust Mask or Respirator

Utility knife

Small Containers or Jars

Mixing Containers

Rubber Grouter

Spatula/Ice block Sticks

Rags

Sponges

Bucket

Newspaper

Toothbrush

## Materials

Pattern Paper

Forms

Plastikote Acrylic Sealer

Primer or Paint Sealer

Coloured Glass

Glass Nuggets or other inclusions

Bitebak Tape

Mosaic Isolastic Bond Adhesive

Grout

Grout Sealer

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