

Mosaics

a complete guide



Mosaics

Introduction:

Mosaic work is an ancient art form that has become increasingly popular in recent years. Mosaic's can be as simple or as complex as your design requires which makes it ideal for all abilities from children with special needs through to art and design graduates.

There are several different types of mosaic tile available, each with differing properties, i.e. size, thickness, appearance and suitability for indoor or outdoor use. Before deciding which tiles to complete your project with, take into consideration how the finished mosaic will look, i.e. would it be enhanced with the use of traditional, uneven Byzantine tiles or will it benefit from the crisp lines of square glass tiles. Many other items can be used to add interest/enhance your design such as shells, stones, pebbles, glass nuggets, millifiore and broken pieces of pottery/ceramics.

The basics of mosaic design are very easy. Looked at simplistically it is a 3-layer process, Adhesive - Tiles - Grout. However, the type of adhesive and grout used will depend on a few different factors, i.e. whether the mosaic is for outdoor use, the base the tiles are being adhered to and the type of mosaic tiles being used.

In preparation for your mosaic work it helps enormously to draw out your design first, mapping out colour using coloured pens/pencils. This will help you actually put your design into practise.

If there are small areas of colour in your design, the tiles you are using may need to be cut down using tile nipper. Always wear safety goggles to protect your eyes from flying pieces of tile. Small pieces may be easier to pick up and place within your design using tweezers.

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Types of tiles

Venetian Glass Mosaic Tiles

20mm square (fig 1):

The most popular of the mosaic ranges used to cover most types of surfaces both indoors and outdoors. 3.7mm thick. The smooth side of the tile is the top surface and the ridged side is the underneath.

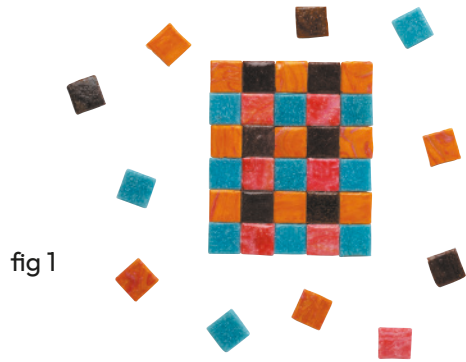


fig 1

Venetian Glass Mosaic Tiles

10mm square (fig 2):

Specifically designed for computer aided murals and graphics. Tiles can be set out and designed on a 'waffle' tray and applied by the reverse method. Approx. 3.7mm thick. The 10mm smooth square is the top of the tile and the ridged smaller square is the underneath.

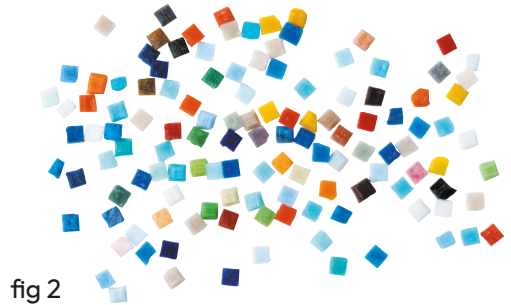


fig 2

Ceramic Matt Mosaics (fig 3):

A matt, satin like finish particularly suitable for the reproduction of antique mosaic designs. 25x25mm, 3.8mm thick.

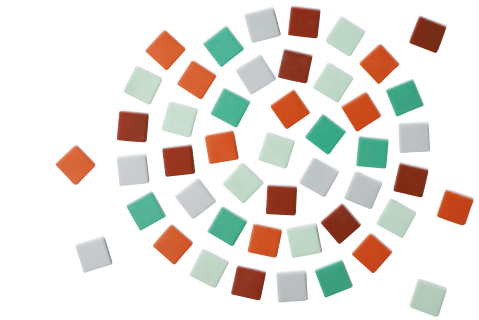


fig 3

Byzantine Mosaics (fig 4):

100% handcrafted, opaque and irregularly hand cut with a bright porcelain/enamel appearance. Generally used by the intermediate and advanced level users. Piece size can vary enormously from 5mm up to 15mm on both dimensions. Approx. 6mm thick. Traditionally applied using the reverse method.



fig 4

Mirror Mosaic Tiles (fig 5):

Supplied in sheets with the tiles adhered to a material backing which can be cut if the tiles are required individually. 25x25mm. Mirror mosaics are placed very close together and do not have grout applied as the abrasiveness of the grout would scratch the mirror surface.

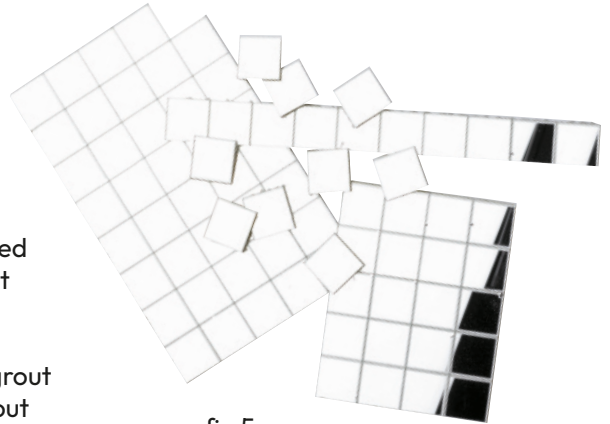


fig 5

Extras to Mosaic Tiles



Sea Shells



Glass Nuggets



Milliflore

Basic tools

Cement

There are no firm and fast rules for mixing cement and techniques will vary from one mosaic to the next. As a starting block, the following is a tried and tested mixture. Mix 3 parts of sand with 1 part of cement mortar. Once the dry ingredients are thoroughly mixed, heap into 'molehill' shape and create a well in the centre. Slowly pour into the well a small amount of water and using an old spoon or trowel, mix from the centre outwards. The cement mix should always be firm. If any water is visible after mixing, too much has been added and the properties weakened. To strengthen the cement mixture you may wish to add P.V.A. adhesive to the water in a ratio of 3 parts P.V.A. to 1 part water. This is an advantage to designs on a vertical base or those using added mosaic materials such as pebbles etc. Leave the cement to cure for approximately 3 days before grouting.

Cement Colour

Available in a selection of colours and added to sand cement mixture when used as grout.

Ready Mixed Tile Adhesive

As a quick and easy alternative to cement mortar, ready mixed tile cement is especially suitable for smaller projects. Apply the tile cement to the base in a layer approximately 3-4mm deep. Firmly press the tiles into the cement and leave to dry for approximately 24 hours before grouting. It is advisable to only apply a small amount of tile cement at a time when working on a large mosaic design. This is because the cement starts to set within 20 minutes of application.

Grout

Grouting is a creamy substance that is pushed into the crevices between tiles to give a smooth surface and make the mosaic work aesthetically pleasing.





Use a float or palette knife to evenly spread the grouting across your design, making sure it is compressed into every gap. Once satisfied you have enough grout around your tiles, gently wipe any excess off using a damp sponge. Keep rinsing the sponge in clean water, as it will easily become clogged.

Leave the grout to harden for 24 hours before cleaning the surface of the tiles again with a sponge and clean water.

Nippers

Available in different models from basic to professional. The better the nipper the more precise the cutting of the tile. Basic nippers will break the tiles into smaller pieces for intricate work and a good pair of professional nippers will trim tiles into exact shapes such as circles.

Float/Palette Knife/Trowel

To be used for the spreading of mortar, tile cement grout etc.

Sponge

For cleaning mosaic designs.

Gloves/Goggles/Masks

Recommended to be worn when working with mosaics for health and safety reasons.

Tweezers

Ideal for positioning small pieces of tiles.

Waffle Board

A plastic tray designed to take 10mm tiles. 260x285 (24x26 tiles).

The direct method

The 'direct method' is probably the simplest method of mosaic work, ideal for beginners. The tiles used should be of one thickness, otherwise the finished work will have an uneven finish. Before you begin, have to hand all the necessary equipment, (See basic tools - pages 6-7), and the appropriate adhesive for your tiles.

1. Using a soft pencil or crayon carefully draw the outline of your design onto the base that you are tiling onto.
2. Working on one small area at a time, prepare the tiles to fit your design. Where the design permits, leave a gap around each tile of approx, 2mm. It does not matter if the gap is slightly bigger than this but avoid putting tiles so close together that there is no gap. This will only give an unprofessional finish. Lay the tiles on top of the base to see how they look and once you are happy, carefully move the tiles to one side.
3. Apply an even layer of adhesive to the base where the prepared tiles will fit. Do not lay down too much adhesive as surplus will be squeezed through the tiles and create a mess on the surface of your work. Press the tiles into the adhesive firmly and evenly.
4. Continue steps 2/3 until all of your mosaic work is complete. Let the adhesive completely dry according to manufacturers instructions.



Stage 1



Stage 2



Stage 3



Stage 4

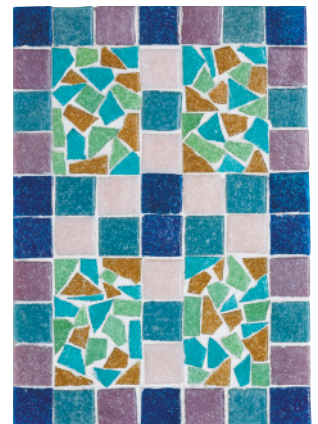


Stage 5



Stage 6

5. The next step is to apply grout to your work. Grout is a creamy substance that is pushed into the gaps around the tiles. It then dries to a hard plaster like finish which not only protects your work but greatly enhances the finished look. Always wear gloves when working with grout as it can be very abrasive to the skin. Mix the grout according to the manufacturers instructions and using a palette knife, small trowel or squeegee spread it over the surface of the tiles. Push the grout around, forcing it between the tiles and filling every gap.
6. Once you have covered the work in grout wipe the excess off with a damp sponge and clean cold water. You will have to rinse the sponge continuously but wring it out well before applying it to the tiles as you do not want to soak them - this would ruin the grout. Wipe away the excess but do not worry about getting all of the grout from the tiles as they will be cleaned and polished later.
7. Leave the grout to dry completely - usually for at least 24 hours. (Not illustrated).
8. Finally, Remove excess grout from your tiles with a clean sponge and warm water. Glass/Ceramic tiles may be wiped with ordinary household polish and a soft cloth. For marble tiles finish with a coating of Stone Wax and Colour Booster.



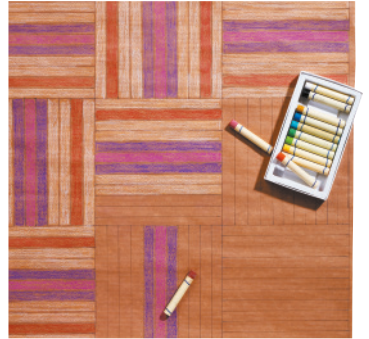
Stage 8

The reverse method

The reverse method is particularly useful for using on tiles such as smalti that have differing depths, or for tiling onto an uneven surface. The tiles are temporarily stuck face down to a piece of paper then pressed into cement which 'takes up' the depth of the tiles giving a relatively flat surface.

1. Draw your design onto a piece of paper such as brown Kraft/ wrapping paper. Ensure that the design fits onto the area you are tiling, so that you have a paper pattern of the finished work. It is not important to colour the paper design but it would be advantageous to have a colour version of the design close by to refer to.
2. Working on a flat surface, prepare the tiles to fit to your design. Have to hand a container of Washaway PVA and a small brush to apply the adhesive with. Once you have prepared the tiles for a small area of your design stick them - face down - to the paper pattern with the Washaway PVA. As with the direct method leave a gap around all the tiles of approximately 2mm.
3. If your work is fairly small you can use one piece of paper for the whole of the design. However, for large mosaics, it may be better to cut the paper into sections, rather like a jigsaw, to be re-assembled once the work is finished.

Stage 1



Stage 2



Stage 3



4. Once all of your tiles are firmly stuck to the paper and the adhesive is dry you can begin to cover the base to which you are applying the tiles with cement. Wearing rubber gloves, spread it across the base with a trowel. It is best to apply the cement to the whole of the base in one go, however if the work is extremely large it may be more feasible to work in sections. It is very important to make sure the cement is applied in an even layer, thick enough to cover the base.

Stage 4



5. Carefully pick up your paper pattern and place it base down onto the wet cement (so that you are left with the brown paper facing you). Press firmly so that every tile comes into contact with the cement. Leave for approx 3 days for the cement to set.

Stage 5



6. DO NOT attempt to remove the paper until the cement is completely set. If you have any doubts as to whether the cement is dry leave the mosaic for another 24 hours. (Not illustrated).

7. Using a sponge and plenty of warm water soak the brown paper until the Washaway PVA dissolves and the paper can be removed. This may take a little time but be patient and avoid trying to pull the paper off before the PVA has dissolved.

Stage 7



8. If the tiles were not evenly pushed into the cement a few may come loose and fall from the design while you are removing the paper. They can easily be replaced directly into the appropriate spaces with a little cement.

Stage 8



9. The next step is to apply grout to your work. Grout is a creamy substance that is pushed into the gaps around the tiles. It then dries to a hard plaster like finish which not only protects your work but greatly enhances the finished look. Always wear gloves when working with grout as it can be abrasive on the skin. Mix the grout according to the manufacturers instructions and using a palette knife, small trowel or squeegee spread it over the surface of the tiles. Push the grout around, forcing it between the tiles and filling every gap.

10. Once you have the work in grout wipe the excess off with a damp sponge and clean cold water. You will have to rinse the sponge continuously but wring it out well before applying it to the tiles as you do not want to soak them - this would ruin the grout. Wipe away the excess but do not worry about getting all of the grout from the tiles as they will be cleaned and polished at a later stage.

11. Leave the grout to dry out completely - usually for at least 24 hours. (Not illustrated).

12. Finally, remove excess grout from your tiles with a clean sponge and warm water. Glass/Ceramic tiles may then be wiped with ordinary household polish and a soft cloth. For marble tiles finish with a coating of Stone Wax and Colour Booster.

Stage 9



Stage 10



Stage 12



Make your own ceramic mosaic

You will need:

- Assortment of patterned ceramic pieces
- 2 plain tiles
- Tile nippers
- Goggles
- Dust mask
- Ready mixed tile adhesive
- Grout
- Rubber gloves
- Sponge

1. Wearing goggles, begin to cut out regular and repeating shapes using the patterns that you find within the ceramic with the tile nippers. Experiment with shapes and scale, colour and pattern. Lay your design out onto one tile.
2. When the design is complete cover another tile with a thin layer (2-3mm) of ready mixed tile adhesive. Transfer your design across from the first tile, to the adhesive coated tile, pressing each shard into the adhesive.
3. Allow your tile to dry for 24 hours in a warm place. Then, wearing gloves and dust mask, add a cup of tile grout into a mixing cup and add a small quantity of water. Mix gradually to make a thick paste with the consistency of cake mixture.



Stage 1



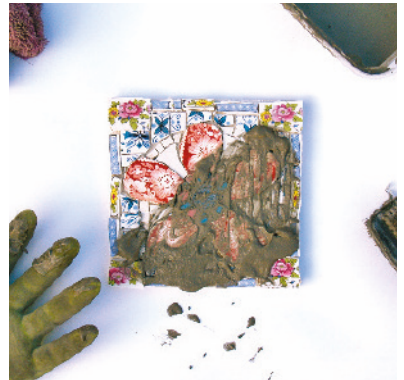
Stage 2



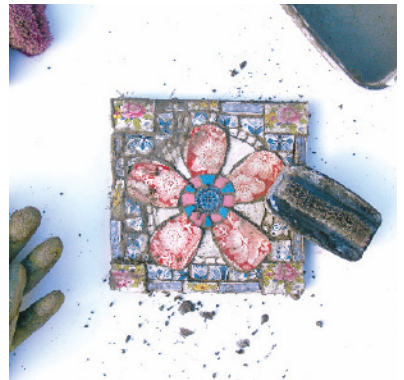
Stage 3

4. Use your fingers or a rubber kidney to push the grout mixture into the gaps of the ceramic and around the edges.
5. Wait for a few minutes for the grout to begin to set, then use an old nail brush or sponge to brush off the excess grout which should wash away in a wet powder.
6. Use an old towel to polish off the remaining grout and your tile is complete.

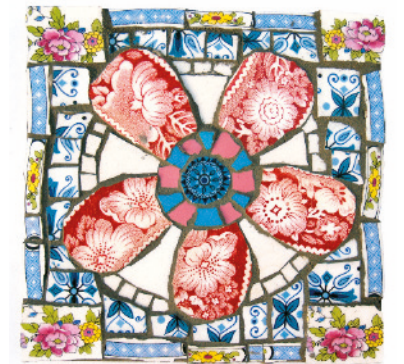
Stage 4



Stage 5



Stage 6



Mosaic tile supplies

Tiles

10mm Glass Mosaic Tiles: Available in packs of 100g of a single colour, plus 500g assorted colours.

20mm Glass Mosaic Tiles: Available in sheets of 225 of a single colour, plus assorted packs.

Smalti Byzantine Mosaic: Available in 1kg packs of assorted shades.

10mm Archaeological Matt Mosaic Tiles: Available in a 1kg tub, plus assorted packs.

20mm Archaeological Matt Mosaic Tiles: Available in a 1kg tub, plus assorted packs.

80mm Freestyle Matt Mosaics: Available in 1kg packs, plus an assorted pack.

Accessories

Shells: 1kg assorted sea shells.

Millefiori: 35g assorted designs.

Glass Nuggets: 42 assorted shapes and colours.

Glass Nuggets: 60 assorted shapes and colours.





For more information on our range of mosaic materials including tools, adhesives, grout, publications and mosaic base materials, contact us via:

Call: **+44(0)116 269 7711**

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