

**LAYING MOSAICS**

**BISAZZA**

MOSAICO

## OUR COMMITMENT TO INSTALLERS

Bisazza's commitment can be seen not only in the fact that it creates and manufactures high quality, prestige materials, but also in the attention it dedicates to installers, with a range of products and tools designed to encourage faultless workmanship.

But this is not all. An installers' program has been devised, based on a central core of Bisazza courses, with the aim of coaching professionals to a high level of proficiency. Bisazza has trained more than a thousand people over the last ten years, from Italy and elsewhere and, to this day, continues with its commitment to imparting the skills that are so essential to the correct interpretation of the quality and excellence traditionally embodied in the company's products.

For information about training courses and related initiatives organized by Bisazza for installers, contact:

**Technical Assistance**

**e-mail: [installation.department@bisazza.com](mailto:installation.department@bisazza.com)**

The Technical Assistance and Installation Service, with its team of experts, is also happy to answer questions about laying mosaics and to offer solutions at any time.

## THE IMPORTANCE OF PROFESSIONAL STANDARDS

Customer satisfaction depends, to a considerable extent, on the selection of professional contractors able to guarantee good workmanship when performing basic tasks - as when installing mosaics - through which the prestige and value of the Bisazza brand finds its full expression.

As tilers play an important role as partners in the process, this catalogue - a guide to the essential ingredients of a professional job - is dedicated to them.

Before proceeding further, however, we would like to focus on one or two key points that cannot be ignored if good results are to be achieved.

*1) Heated floor. Once the screed has cured, it must be tested before tiling operations can commence. Contact the heated floor installer for information about specific procedures to follow for that floor. This will usually involve conducting a complete heating/cooling cycle over a period covering a complete week: the heating is turned on at the minimum setting for two days, and the temperature increased thereafter by 5° C every two days up to the maximum permissible, which is also maintained for two days; then start taking the temperature down 5° C every two days until the minimum is reached, leaving the heating on during the laying. This procedure is necessary in all seasons, including summer.*

- Before starting any job, make a careful assessment of the substrate (plaster, marble, metal, wood, heated floor<sup>1</sup> or other) remembering that each type of material requires appropriate preparation
- The substrate must present a perfectly smooth, even surface, and a mature, sound and stable structure. If the surface involved is a heated floor, apply a reinforced plastic membrane of the type used for water-proofing, to the substrate
- To ensure the best results, use only products that are technically and chemically suited to the substrate being tiled
- Make sure that the instructions given on packaging and technical data sheets for Bisazza products are followed to the letter, and apply this general rule for all other products utilized; adhere strictly to the safety instructions.
- When transporting, carrying and handling boxes of Bisazza mosaic tiles, keep them horizontal and store in a dry place sheltered from rain and damp.
- If the job entails blended colour or modular designs, before starting, carefully read the laying plan that is supplied by Bisazza and can be found in every box
- Where mosaic tiles are to be laid on a surface that is in permanent contact with water, before starting work we recommend treating the surface involved with suitable water-proofing (contact a company that manufactures chemical products for the building trade)
- Remember that a good tiler applies the mosaic with uniform spaces between the sheets for a harmonious overall effect.

## BISAZZA PRODUCTS FOR LAYING MOSAIC

The efforts of skilled and expert professionals alone are not enough when laying Bisazza mosaic tiles. Special materials and tools are also needed. With this in mind, combining the results of its own analysis and research with feedback from installers, the company has formulated a series of special products and designed a number of tools intended specifically to facilitate the process of laying mosaic tiles and to provide perfect end results. In effect, these include the **Installation Kit** and **Epoxy Installation Kit** which contain everything needed to lay and grout 2 square metres of 20x20 mm mosaic tiles.

For bigger jobs, **Ad Hoc** adhesive can also be bought in larger containers than those that come with the standard Installation Kit.

Bisazza also offers **ULTRA** latex to be added to Ad Hoc adhesive for use on swimming pools and outdoor fixtures.

APPLICATIONS	INSTALLATION KIT	EPOXY INSTALLATION KIT
Indoor	X	X
Swimming pools, sauna, etc.	+ ULTRA	X
Thermal or salt water pool		X
Outdoor	+ ULTRA	X
SURFACES	INSTALLATION KIT	EPOXY INSTALLATION KIT
Cement screed	X	X
Concrete	X	X
Untreated smooth plaster	X	X
Heated floor	X	X
Wood		X
Metal		X
Glass		X
Aluminium		X
Plaster board		X
Plaster board treated with primer	X	X
Polystyrene panels with cement finish	X	X
Lightweight cement panels	X	X

### INSTALLATION KIT



#### AD HOC (2.7 Kg)

High performance white cement tile adhesive for laying Bisazza glass mosaics and floors.

#### FILLGEL PLUS UVR (3 Kg)

Coloured washable epoxy filler for Bisazza glass mosaics.

### EPOXY INSTALLATION KIT



#### E GLUE (3.240 Kg)

Bi-component epoxy adhesive for bonding Bisazza glass mosaics.

#### FILLGEL PLUS UVR (3 Kg)

Coloured washable epoxy filler for Bisazza glass mosaics.

## ADHESIVE FOR BISAZZA GLASS MOSAICS

**AD HOC**

High performance white tile adhesive for laying Bisazza glass mosaics and floors. Ad Hoc conforms to C2TES1 standards and uses nano-technology which provides great flexibility during laying. For use on cement, untreated smooth plaster and compatible water-proofed surfaces.

**APPLICATIONS**

**Ad Hoc** mixed with water is suitable for heated floors, cement screeds, dry screeds and even porous concrete. Compatible surfaces:

- cement surfaces (concrete, untreated smooth plaster or screed).
- plaster board treated with primer
- compatible waterproofing surfaces (not permeable).

Recommended for laying Bisazza mosaic tiles for swimming pools and outdoor applications if mixed with ULTRA latex.

**TECHNICAL SPECIFICATIONS**

**Ad Hoc** is a high performance white adhesive with the following specifications:

- pure white colour which does not alter the original tonality of Bisazza glass tiles
- easily worked creamy paste
- highly thixotropic meaning that when applied vertically or to a ceiling, does not congeal or prevent tiles being manoeuvred into position
- open time and correction times ideal for laying mosaics.

**IMPORTANT**

- Ad Hoc is recommended for laying tiles on freshly plastered surfaces.
- If a substrate is particularly absorbent or powdered, we recommend applying a suitable primer first.
- Not suitable for laying tiles on plaster-based surfaces unless a suitable primer has been applied first.
- Not suitable for swimming-pools with salty or thermal water.
- Not suitable for installation of transparent or semi-transparent mosaic tiles in swimming-pools or humid areas.
- Wait at least 20 days from completion of tiling before allowing contact with water. If the job is tiling a swimming pool or an outdoor application, we recommend using BISAZZA ULTRA latex instead of water.
- Store AD HOC in a cool dry place.
- Not suitable for laying mosaic tiles with artistic techniques.

**SAFETY INSTRUCTIONS**

- Product for professional use.
  - Keep out of the reach of children.
  - Irritant for eyes, respiratory tract and skin.
  - In the event of contact with eyes, wash immediately with plenty of water and consult a doctor.
- Before use, read the information on the package and safety card.

Packaging	2.7 kg bag 15 kg bag	
Mixing proportions	2.7 kg of AD HOC + 1.6 litres of clean water 2.7 kg of AD HOC + 1.7 litres of Ultra latex	
Storage	Store in a cool and dry place in original sealed packet. The expiry date is printed on the packet.	
APPLICATION DATA	AD HOC	AD HOC + ULTRA
Conforms to standards	C2TE S1*	C2TE S2*
Application temperature	from +5° C to +35° C	from +5° C to +25° C
Open time	approx 30 minutes	approx 30 minutes
Mixture working time	approx 90 minutes	approx 60 minutes
Walkable	after 8 hours	after 10 hours
Groutable	after 8 hours*	after 10 hours*
Operational temperature range	from -30° C to +80° C	from -20° C to +80° C
Drying times (for tubs, swimming pools, outdoor applications)	/	20 days

at +23°C and 50% RH.

- \* Wait until the adhesive dries before grouting.

**WARNING**

Whilst the information and directions given above are based on the experience of Bisazza to date, they must be taken nonetheless as purely indicative. Always check that the product is suitable for the intended application before using it. The user assumes all liabilities from use of the product.

**ADHESIVE COVERAGE ADHOC - powder (Kg/m<sup>2</sup>)**

TROWEL	AD HOC 15 KG
3.5 mm	1.25
5 mm	1.65

The coverage figures shown above include two 1 mm skim coats

**\*NOTE**

C = Cement  
 2 = Improved with additional characteristics  
 T = With limited slip  
 E = Extended open time  
 S1 = Deformable adhesive  
 S2 = Highly deformable adhesive

## COLOURED FILLER FOR BISAZZA GLASS MOSAICS



### FILLGEL PLUS UVR

Special coloured epoxy filler for Bisazza glass mosaics.

### APPLICATIONS

- For grouting Bisazza mosaic tiles on floors and coverings.
- Suitable for indoor and outdoor applications.
  - Also suitable for damp and permanently damp conditions.
  - Particularly suited for use with heated pools or salt water, or where complete hygiene is required.

### TECHNICAL SPECIFICATIONS

**FILLGEL PLUS** is a thixotropic product containing 2 epoxy resin components, silica sands and special additives with excellent resistance to wear and superb application and cleaning characteristics.

When applied properly, FILLGEL PLUS provides grouting with the following characteristics:

- smooth, compact final surface.
- uniform, resistant colours.
- resistance to water and most chemical agents.
- optimum hardness and ability to withstand heavy traffic.
- no cracks or crazing.
- excellent bonding to sheets.

### IMPORTANT

- Do not use for grouting surfaces subject to continuous contact with oleic acid.
- Take care not to cover expansion joints, which should be sealed with appropriate products.
- **FILLGEL PLUS is not water-proofing.**
- Do not dilute FILLGEL PLUS with water or any solvent to make it more fluid: this will invariably have an adverse effect on the performance of the product.
- To prevent affecting the performance of the product, all of the two components must be mixed.
- Do not use portions of the product.
- After some times, clearer colours tend to turn yellow, when used outside.
- In case of application of grout 1104 Neutro Base in swimming-pools or in extremely humid areas, the grout preparation must be carried out carefully as this tint is colourless and semi-transparent.
- Slight variations in colour can occur from one batch of material to another.
- The workability times vary considerably in relation to environmental and substrate conditions.
- Wait until the adhesive dries before grouting.
- Do not cover any grouted surface for 4 days.

### SAFETY INSTRUCTIONS

- Product for professional use.
  - Keep out of the reach of children.
  - Irritant for eyes, respiratory tract and skin.
  - May cause sensitisation by skin contact.
  - In the event of contact with eyes, wash immediately with plenty of water and consult a doctor.
  - Wear suitable clothing, gloves and protective glasses.
  - If possible, use in well ventilated areas.
  - Do not use for pools containing fish.
- Before use, read the information on the package and safety card.

Packaging	Part "A" and Part "B" - A total of 3 Kg to be mixed at the time of use
Storage	Store in a cool and dry place in original sealed packet. The expiry date is printed on the packet.
APPLICATION DATA	FILLGEL PLUS
Classification as per EN 13888	European Standard EN 13888 RG Class
Max workability time	Max 50 minutes from mixing
Application temperature	from +15°C to +30°C
Operational temperature	from -15° C to +70° C
Walkable	after 24 hours. At lower temperatures, times are longer*
Drying time	after 7 days. At lower temperatures, times are longer* In pools and humid environments, wait for 14 days.

at +20°C and 50% RH. \* in the meantime, prevent standing water.

RG = Reactive Sealant

### WARNING

Whilst the information and directions given above are based on the experience of Bisazza to date, they must be taken nonetheless as purely indicative. Always check that the product is suitable for the intended application before using it. The user assumes all liabilities from use of the product.

### FILLGEL PLUS UVR COVERAGE (Kg/m<sup>2</sup>)

MOSAIC	FILLGEL PLUS
20x20 mm	1,45
10x10 mm	1,45
VARIATIONS	1
OPERA 25* (25x25 mm)	1,6
OPERA 15 (15x15 mm)	2,3
5X5* (50x50 mm)	1
OPUS ROMANO 12	1,2
VINTAGE	1

### FILLGEL PLUS UVR COVERAGE (Kg/m<sup>2</sup>)

MOSAIC	FILLGEL PLUS
DECORATIONS USING ARTISTIC TECHNIQUE	1 - 1,45
WAVE	1,45

\*5 mm trowel

### NOTE

For orders of greater than 50 m<sup>2</sup> the coverage of Fillgel plus drops by 0.1 kg/m<sup>2</sup> for all mosaic formats except 5X5.

The figures above refer to "by the book" laying and to the correct use of Bisazza tools.

## EPOXY ADHESIVE FOR BISAZZA GLASS MOSAICS



### E GLUE

High performance thixotropic epoxy adhesive for BISAZZA glass mosaics and plates

### APPLICATIONS

For laying Bisazza mosaic tiles outdoors on differing substrates:

- cement surfaces (concrete, smooth untreated plaster or screed)
- wood, metal, glass

Since eGlue is resistant to water absorption and steam diffusion, it can be used in humid areas such as showers and steam rooms, or in submerged areas such as swimming-pools and fountains.

### TECHNICAL SPECIFICATIONS

- white, low odour.
- no vertical slip.
- good mechanical resistance.
- excellent adhesion to different types of surface.
- good resistance to chemical agents.

### IMPORTANT

**E GLUE is not waterproofing.**

- Take care not to let eGlue fill expansion joints.
- Do not dilute eGlue with water or any solvent to make it more fluid: this will invariably have an adverse effect on the performance of the product.
- To prevent affecting the performance of the product, all of the two components must be mixed.
- Do not use portions of the product.
- If used outdoors, the product tends to yellow.
- The workability times vary considerably in relation to environmental and substrate conditions.
- To be used on perfectly dry surfaces.

### SAFETY INSTRUCTIONS

- Product for professional use.
- Keep out of the reach of children.
- Irritant for eyes, respiratory tract and skin.
- May cause sensitisation by skin contact.
- In the event of contact with eyes, wash immediately with plenty of water and consult a doctor.
- Wear suitable clothing, gloves and protective glasses.
- If possible, use in well ventilated areas.

Before use, read the information on the package and safety card.

Packaging	Part "A" and Part "B" - A total of 3.24 Kg to be mixed at the time of use
Storage	Store in a cool and dry place in original sealed packet. The expiry date is printed on the packet.
APPLICATION DATA	E GLUE
Classification as per EN 12004	R2T*
Application temperature	from +15° to +30°
Open time	2 hours
Correction time	3 hours
Walkable	after 24 hours
Groutable	after 12 hours*
Operational temperature range	from -20°C to +80°C
Drying times (for tubs, swimming pools and outdoor application)	after 7 days.

at +23°C and 50% RH.

- \* Wait until the adhesive dries before grouting.

### WARNING

Whilst the information and directions given above are based on the experience of Bisazza to date, they must be taken nonetheless as purely indicative. Always check that the product is suitable for the intended application before using it. The user assumes all liabilities from use of the product.

### BISAZZA E-GLUE COVERAGE (Kg/m<sup>2</sup>)

Application	Coverage (Kg/m <sup>2</sup> )
Skim	0.9
Reinforcing skim	1.4
Laying	1.6

\*NOTE

R = Reactive adhesive

2 = Improved

T = Slip resistant

## EXPANDING LATEX ADHESIVE

**ULTRA**

Expanding latex adhesive to be mixed exclusively with **Ad hoc** to improve product characteristics.

**APPLICATIONS**

**ULTRA** is formulated for fixing BISAZZA mosaic tiles to indoor or outdoor surfaces that are subject to a wide range of temperature changes thanks to its inherent resistance to bad weather and frost.

**ULTRA** mixed with Ad hoc improves adhesion to absorbent and non-absorbent mineral surfaces and can be used on heated floor screed, balconies, terraces, prefabricated concrete, outdoor façades and swimming pools.

**TECHNICAL SPECIFICATIONS**

- mixed with AD HOC forms a creamy paste.
- makes the hardened product deformable and flexible.
- no vertical slip with extended open time.

**IMPORTANT**

- Do not let ULTRA dry on the skin.
- Remove any dry excess with soap and water.
- Protect the eyes against splashes.
- Store unopened in a dry place at less than 30°C.
- Protect from frost.

Read the Bisazza Ultra safety card and product label before use.

**LATEX COVERAGE ULTRA (Kg/m<sup>2</sup>)**

MOSAICO	ULTRA
20x20 mm	0,8
10x10 mm	0,8
VARIATIONS	0,8
OPUS ROMANO 12	
OPERA 25* (25x25 mm)	1,05
OPERA 15 (15x15 mm)	0,8

**LATEX COVERAGE ULTRA (Kg/m<sup>2</sup>)**

MOSAICO	ULTRA
5X5* (50x50 mm)	1,05
VINTAGE	0,8
DECORATIONS USING ARTISTIC TECHNIQUE	-
WAVE	0,8

\*5 mm trowel

Packaging	9,5 kg drum
Mixing proportions	15 kg of AD HOC + 9,5 Kg of ULTRA
Storage	Store in a cool and dry place in original sealed packet. The expiry date is printed on the packet.
APPLICATION DATA	ULTRA
Classification as per EN 12004/12002	C2TE S2*
Application temperature	from +5°C to +25°C
Open time	approx 30 minutes
Mixture working time	approx 60 minutes
Walkable	after 10 hours
Groutable	after 10 hours
Operational temperature range	from -20°C to +80°C
Drying times (for tubs, swimming pools and outdoor application)	after 20 days.

at 23°C and 50% RH.

**WARNING**

Whilst the information and directions given above are based on the experience of Bisazza to date, they must be taken nonetheless as purely indicative. Always check that the product is suitable for the intended application before using it. The user assumes all liabilities from use of the product.

**\*NOTE**

C = Cement  
 2 = Improved with additional characteristics  
 T = With limited slip  
 E = Extended open time  
 S2 = Highly deformable adhesive



## BISAZZA TOOLS AND ACCESSORIES FOR LAYING MOSAIC

As part of their mosaic laying product strategy Bisazza has also designed specific tools and accessories that tilers can order by contacting the company (tel. +39 0444 707511, fax +39 0444 492088) or local retailer. In detail, these tools include: a notched trowel for skimming and spreading adhesive; a square tipped trowel for correcting gaps; a float that ensures good adhesion of the sheets to walls and is also useful for grouting; tile snips and a diamond tipped cutting disc ; a polyester felt scrubber for cleaning and an open pore cellulose sponge.

## SPECIAL POLYESTER SPONGE

**SCRUB**

Special white scrubber specifically for removing any excess **FILLGEL PLUS** during grouting.

**INSTRUCTION FOR USE**

Before the grout starts to harden, wet the surface with water and buff with the **SCRUB** in small circles on the tiles until the excess grout forms an emulsion. Spray with water each time the emulsion seems dry and struggles to form. Following this, use the **SPONGE** to remove the excess grout

**COVERAGE** about 1 for every 4 m<sup>2</sup> of mosaic.



## CELLULOSE SPONGE

**SPONGE**

Special open pore cellulose sponge. Specifically for smoothing **FILLGEL PLUS** after the removal of excess grout using the **SCRUB**.

**INSTRUCTION FOR USE**

For removing the paper backing from mosaic tiles and for the final cleaning of **FILLGEL PLUS** during grouting.

**COVERAGE** about 1 for every 4 m<sup>2</sup> of mosaic.



**LAYING  
INSTRUCTIONS**

## LAYING 20x20 mm MOSAICTILES PRE-ASSEMBLED ON A MESH BACKING



1a

1

### CHECKING AND PREPARING THE MATERIALS

Before starting work, check the boxes containing the Bisazza mosaic tiles and make sure that there is sufficient material to complete the job. Every box is marked with the production batch number, colour, order number and other details to be referenced should more of the same material be needed.



2a

2

### SKIMMING

This step is needed to make the substrate perfectly white, smooth and uniform for tiling (a substrate of a different colour may adversely affect the look of the job). If using a cement plaster, use Bisazza **Ad Hoc** adhesive mixed with water. In the event of tiling on plasterboard, a suitable primer must be applied to the wall before the adhesive (contact a company that manufactures chemical products for the building trade). Once the adhesive has been prepared, spread it uniformly with a smooth trowel. It must be allowed at least 5 hours to dry.



3

### DRAWING THE STARTING LINE

Lay the sheets on the ground, measure the total size of three of them placed side by side in such a manner that the distance between one sheet and another is the same as that between one tile and another. Use a laser level to trace the lines that will guide the correct position of the sheets on the surface with the same distance between them as from the three sheets mentioned above.



4

### PREPARING THE ADHESIVE

Prepare the Bisazza Ad Hoc adhesive by mixing with water and use the 3.5 mm notched Bisazza trowel to spread it on the prepared surface only. Use the smooth edge of the trowel first, then the notched edge, drawing the teeth across and "combing" the adhesive to produce a uniformly ridged bed. The tiles can now be positioned.

The adhesive must always be soft and moist: apply with the trowel at an angle of 45° to the substrate and make sure to apply it evenly without leaving excess adhesive at the joints. When tiling walls, we recommend that the last "combing" is horizontal. When applying the adhesive, take great care to ensure the best possible adhesion by "kneading" the adhesive on the substrate before the final "combing". Lastly, remember that if tiling an area that is permanently subjected to the presence of water (e.g. tubs and swimming pools) it is best to waterproof the surface beforehand with a specific protective sheath and to add **Ultra** latex to the **Ad Hoc** adhesive.

4a



5

### LAYING THE MOSAIC

The tiles are pre-assembled on mesh backing which is placed in DIRECT contact with the adhesive. Make sure that the densest lines of the mesh are pointing vertically. Please Note: the distance between sheets must be the same as that between one tile and the next so that when the job is complete, there are no obvious discrepancies in distance. The mosaic, regardless of format, does not need expansion joints. If they are joints on the substrate, they must be made allowance for and sealed with suitable flexible products.

5a



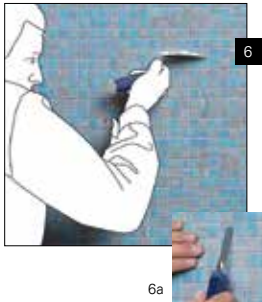
5.1

### GOOD ADHESION

During laying, before the adhesive has dried, tap the sheets into position with a rubber Bisazza trowel to ensure they bed properly and uniformly in the adhesive.

5b





## 6 CORRECTING GAPS

During laying, before the adhesive has had time to harden, there is still time to adjust the gaps between one sheet and the next so as to provide uniform gaps. To do this, cut the sheet with a cutter and increase or decrease the gap between sheets slightly using the Bisazza correcting trowel. This is one of the most delicate stages of the application process but provides results well worth the effort. Leave to set for 24 hours.

6a



## 7 GROUTING

Before grouting, remove any powder and excess adhesive from the gaps and surfaces of the sheets. Prepare the Bisazza epoxy Fillgel Plus grouting by pouring all the contents of the hardener ("Part B" - kg 1) into the paste ("Part A" - kg 2). Make sure to empty the whole container. Mix both components slowly with a mixer at low speed (600 rpm), continue until completely blended then use immediately. On walls, always begin grouting from the bottom to prevent water later used for washing (see point 8) from penetrating the still unfilled gaps. Scoop the grout up with a trowel and place it on the Bisazza rubber float. Begin grouting by moving the float diagonally to the sheet of tiles working from the bottom up in a skimming action until the gaps are completely filled. Take care not to leave excess grout on the tiles. Always use suitable protective gear.

7a



## 8 CLEANING

Once the grout has been applied, there is a limited time span for starting cleaning (see clock) before the grout begins to harden. Start the cleaning procedure by wetting the surface to be cleaned with water spray. Use the white felt Bisazza Scrub (or similar) to wipe the tiles. Any excess grout will form an emulsion and the gaps will be left smooth. Wet the Bisazza Sponge (or similar) and use it to remove the emulsion. Repeat this procedure as often as necessary until the surface is completely clean and make sure that no grout residue remains on the tiles. The felt scrub and sponge can be used time and time again as long as they are thoroughly rinsed in clean water.

Always use clean water for such tasks.



8a



## 9 FINAL CLEANING

To definitively remove any steaks and make the mosaic shine, repeat all the cleaning procedures mentioned above and observe the same times and conditions as above. Always use clean water for these tasks. Do not cover the surfaces for at least 4 days after grouting to allow the product to harden evenly.

9a



## 10 MAINTENANCE

For daily cleaning, we recommend neutral detergents. Do not use wax, oils, hydrofluoric acid, phosphoric acid (or orthophosphoric) or products which contain it. For special cleaning to treat calcium deposits, we recommend using a mildly acid detergent whereas in all other cases, use mildly alkaline products. Always follow the manufacturer's instructions when using these substances and always rinse the surfaces immediately after with plenty of clean water.

## IMPORTANT

a) **Fillgel plus UVR** guarantees uniformity of colour if applied correctly.

The presence of stains or variations in colour can be caused by factors not associated with the product such as:

- incorrect mixing of components A and B
- the addition of unwanted components during mixing of the grout (e.g. water, alcohol etc.)
- poor ventilation of the area involved which enhance the evaporation of liquids used for washing
- covering the tiled surfaces tiles with plastic sheets immediately after grouting or

before the **Fillgel plus UVR** has hardened

- washing the surfaces with overly aggressive detergents
- failure to observe the ideal temperature range for using the product
- the presence of residual water in the gaps before grouting

b) **IMPORTANT:** the excessive use of pencils, (pens, marker pens, etc.) is to be avoided as lines drawn by the tiler before even starting to lay tiles, may remain visible even after grouting. This applies particularly where light coloured grout is to be applied.

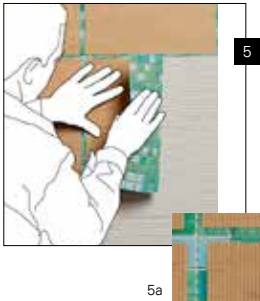
We always recommend the use of a laser level; if a laser is not available, draw very light lines with pencil only.

c) Do not use **Fillgel plus UVR** for grouting expansion gaps. Use flexible products that are specific for that purpose as mentioned above.

d) **Fillgel plus UVR** grout is water repellent but should not be considered as waterproofing.

## LAYING TILES PREASSEMBLED ON A PAPER BACKING

Unlike sheets of tiles pre-assembled on a mesh backing, in this case the paper which holds the pre-assembled tiles in place is on the side of the sheet which remains in sight. The paper backing is not placed in direct contact with the adhesive but is removed once the sheet of tiles has been laid. The procedures from skimming to applying adhesive are the same as described for previously for mosaic tiles on a mesh backing. The description of the procedures involved therefore starts from Step 5.



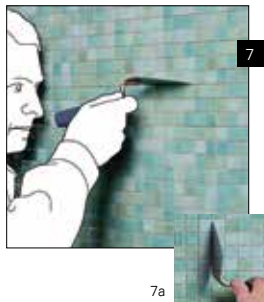
### 5 LAYING THE MOSAIC

To facilitate the laying process, examine the paper backing carefully before starting: this backing has lines which are generally to be kept running in the same direction and, for walls, the vertical direction is best. The sheets are then applied directly to the adhesive with the paper facing the tiler. Take care with the distances between one sheet and the next: the gap between sheets should be uniform for a harmonious overall effect. While laying the tiles, properly tap the sheets into position with a Bisazza rubber float and smooth them out with the correcting trowel, so that they bed firmly into the adhesive for a smooth finish.



### 6 REMOVING THE PAPER BACKING

To remove the paper backing from the sheets, wipe it repeatedly with a damp sponge until the paper begins to peel off with ease. Be very gentle with the paper during this step as the adhesive is still fresh. Remove the paper by peeling it away diagonally from the bottom up and make sure that the sheets do not shift.



### 7 CORRECTING GAPS

During laying, before the adhesive has had time to harden, there is still time to adjust the gaps between one sheet and the next so as to provide uniform gaps. To do this, slide the sheets very gently to increase or decrease the gap between them using the Bisazza correcting trowel. This is one of the most delicate stages of the application process but provides results well worth the effort. Leave to set for 24 hours.



### 7 PREPARATIONS FOR GROUTING

The following day, use a cutter to remove any adhesive that has escaped from the sheet and then wash the mosaic with a sponge dipped in lukewarm water to remove any remaining adhesive from the paper. If the residue is not completely removed, yellow stains may appear after grouting. Repeat the procedure as often as necessary until the sheets are perfectly clean. Take care not to let water get into ungrouted gaps. You can now start the grouting and cleaning steps which are the same as for mosaic tiles on a mesh backing.

When installation is made in submerged areas, in order to avoid any possible bacterial proliferation, we suggest to sanitize joints using a solution of water and chlorine (2%) which should then be rinsed and removed with a vacuum. Before the application of FILLGEL PLUS UVR, check that the joints are perfectly dry.

### SPECIFIC WARNINGS FOR SOME FORMATS

#### 10x10 mm

- Pay special attention to “combing” the adhesive so as to prevent it from escaping between the sheets, remove the paper backing very carefully and gently. Wet it first to prevent tiles from dislodging from the sheet.
- When using the correction trowel to adjust gaps, more care must be taken than is the case with 20x20 mm mosaic.



## LAYING 20x20 mm BLENDED COLOUR TILES PRE-ASSEMBLED ON A MESH BACKING



The colour blending consists of a series of mixed sheets (modules) with colours which fade into each other. Each module has eight sheets - numbered from 1 to 8 - from the lightest to the darkest colour.

Before applying the sheets, read the laying plan that comes with the materials.

The same laying instructions apply as for 20x20mm mosaic tiles pre-assembled on a mesh backing.



Before applying the sheets, read the **laying plan** that comes with the material.

The same laying instructions apply as for 20x20mm mosaic tiles pre-assembled on a mesh backing.



## LAYING MODULAR DESIGNS



The design shown in these illustrations are modular.

Each module consists of numbered sheets which make up the design and have an arrow on the paper backing that indicates the direction they are to be laid in.

It is absolutely essential to follow to the letter the laying plan provided. Before starting we recommend a "dry run" (see photo alongside) in which you lay the sheets on the ground (without adhesive) to get an overall view of the design and to make sure that you have sufficient material.

The same laying procedures apply for these as for mosaics of the same format and type of backing. In this case too, correcting any gaps is vital for an overall harmonious effect. Make sure that the gap between one sheet and the next is the same as that between one tile and the next.



Important: the modular design should be treated like wallpaper. Any join between one module and the next should be positioned out of view (e.g. behind or above a door) to make it as invisible as possible.



## FINISHING

Below we suggest several processes for finishing mosaics that have been pre-assembled on mesh and/or paper backings. The type of mosaic backing is not relevant and this example has been used in different situations regardless of the type of application illustrated. As we have seen before, the laying procedures, from preparing the substrate to skimming, have already been explained in previous sections.

### WALLS AT 90 DEGREES

#### WITH GLASS MOSAIC



#### 1 LAYING THE MOSAIC

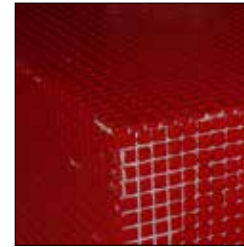
Before all else, make sure that the corner sits at exactly 90°. To check that this is the case, place two sheets of tiles at 90° to each other. If the angle is a perfect right angle, these will match exactly. Once the surfaces have been skimmed and the Bisazza adhesive applied, start laying the mosaic by positioning a sheet, or part thereof, on the surface to be tiled.



#### 2 FINISHING

On completion, make sure that the sheets form a perfect right angle before the adhesive sets. Next you can the usual start grouting and cleaning procedures.

#### WITH THE OPUS ROMANO MOSAIC



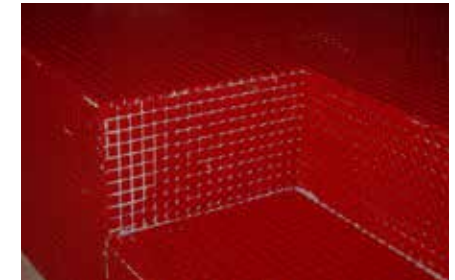
#### 1 LAYING THE MOSAIC

Before all else, make sure that the corner sits at exactly 90°. Once the surface has been skimmed and the Bisazza adhesive applied, start laying the mosaic by positioning one sheet, or part thereof, on the flat surface with the edge of the sheet protruding slightly over the lip of the wall to the width of the mesh which will be positioned vertically to create an overlap (see photo). The depth of the mesh placed on the horizontal surface will be visible.



#### 2 FINISHING

On completion, make sure that the sheets form a perfect right angle before the adhesive sets. Next you can the usual start grouting and cleaning procedures.



### DRILLING MESHES

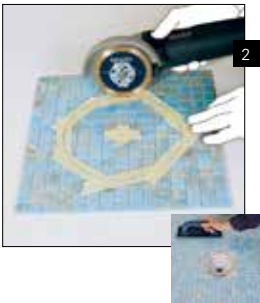
If for some reason you need to drill holes in the tiling, it is always best to do so when laying and grouting has been completed. Use a Widia drill tip for glass mosaic or Opus Romano tiles. Apply only light pressure to the drill and regularly pause then drill again so as to prevent the glass from over-heating and breaking.

## SHOWER TRAYS



### 1 PREPARATION

Once the substrate has been properly prepared, begin laying the mosaic starting from the area around the shower drain cover. Take a sheet of mosaic, place it in the middle of the shower tray and place the drain cover over it as a point of reference; fix adhesive tape to the paper (in the case of tiles pre-assembled on a mesh) and, starting from the middle of the drain cover, use a compass to draw a circle of the same diameter plus 5 mm (the width of a tile), which will then show you exactly where to cut the mosaic.



### 2 LAYING THE MOSAIC

Cut the lines drawn on the mosaic using a diamond tipped cutting disc. Go gently and repeat the action often so as to prevent the mosaic from over-heating and breaking; prepare the Bisazza adhesive and then start laying by placing the sheet obtained in the middle of the shower tray. Continue arranging whole sheets around the cut one until arriving at its edge.



### 3 FINISHING

Once you have finished laying, the section around the drain cover still has to be covered. Prepare individual tiles from the sheet and use mosaic pliers to cut them to shape and finish the job off with the diamond disc to give them a trapezoid shape in such a way that they sit perfectly side by side in a circle. It is very important to leave a small gap of about 4 mm around the drain cover that will be filled with a flexible sealant after grouting has taken place. This is very important for expansion caused by heat that the materials will experience during use. You can now go ahead with grouting, cleaning and applying the sealant.



## STEPS - BENCHES - ROUNDED EDGES

### PRELIMINARY STEPS PREPARING STRIPS OF TILES FROM WHOLE SHEETS

In the case of mosaic pre-assembled on a mesh, prepare the quantity of mosaic strips needed and use a cutter to cut vertically following the direction of the line which appears thickest.

With the various strips now ready, carefully cut the thread of the mesh that is protruding at the side then prepare the tiles of each strip by cutting a small part of the mesh between one tile and the next to form a flat curved surface.

In the case of mosaic pre-assembled on a paper backing, prepare the material by cutting the sheets into strips of tiles following the lines on the paper using a smooth trowel. Cut the backing well and only leave a small amount of paper in the middle of the tiles so that the edges are visible and allow the rounded edges to form a curve.

## STEPS



### 1 DRAWING THE STARTING LINE

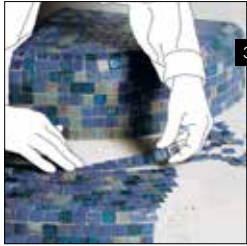
Laying must always start from the highest step. Before applying the Bisazza adhesive, it is a good idea to create a reference point for the work. Use a pencil to draw a horizontal line on the riser that is parallel to the plane of the first step. Remember to make the line very light so that it is invisible after grouting, especially if using light coloured grout.



### 2 LAYING THE MOSAIC

After applying the adhesive, start laying the mosaic horizontally starting from the top of the riser at the pencil line. Continue working up using strips and single tiles as required.





### 3 CORRECTING GAPS

When you get to the tread, it is useful to have a reference to make the job easier and of higher quality: first place the strips at both ends of the surface to be tiled. As the surface gradually gets smaller, use a trowel to apply the adhesive. Now use the square tipped trowel to correct the tiles in such a way that the gaps between one tile and the next are uniform. Continue laying by placing one tile at a time beginning alternatively with one on the right then one on the left sides of the step.



### 4 CUTTING THE TILES

As you make progress with the tiling, you will need to fill the small gaps that appear between one tile and the next on the curved surface, at corners or in other awkward places. You can use mosaic pliers to cut the tiles to the right size; if the gap to fill is less than half a tile, we recommend that you remove another whole and fill the space with two suitably cut tiles instead of just one very small one. The aesthetic improvement is well worth the trouble. If on the other hand you have to cut a whole sheet transversely or follow the line of a curve, first use a coloured marker to trace a line on a sheet of mosaic then go ahead and cut with the Bisazza diamond disc cutter.

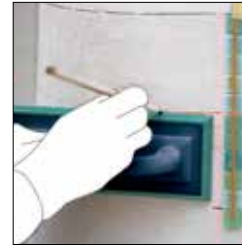


### 5 THE END RESULT

Continue laying the tiles along the riser of the next step. And so on... When the work has been completed, use the correction trowel to make any adjustments necessary to the gaps between one tile and the next. After this, you can start the grouting and cleaning procedures as explained in previous pages.



## BENCHES



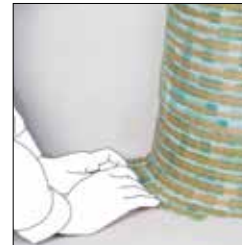
### 1 DRAWING THE STARTING LINE

As the object to be tiled has a particularly difficult shape, it is important that the surfaces involved are properly skimmed until they are smooth and regular. Once this has been done, you can start by laying the first two strips on the backrest - one horizontally and one vertically as shown in the photo - in such a way that they form the main points of reference. After every five vertical tiles, make a mark with a pencil then use the laser level to create a reference grid for laying. Use the pencil again to very lightly trace the horizontal and vertical lines cast by the laser.



### 2 LAYING THE MOSAIC

Begin laying at a corner: place one strip of tiles vertically and one horizontally on the first line traced. Continue laying the tiles horizontally and every now and then, if the mosaic has a paper backing, dampen it with a sponge: this will help you move individual tiles more easily and conform them to the shape of the bench.



### 3 CURVES

When you reach the where the bottom of the backrest meets the seat, retrace the reference lines and continue laying with the same procedures as before.

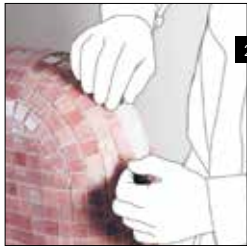


## ROUNDED EDGES



### 1 LAYING THE MOSAIC

Once the surfaces have been skimmed and the Bisazza adhesive applied, lay the first two sheets over the rounded surface so that they act as guides for both the surfaces to be tiled. Continue laying the mosaic, one sheet under the next working downwards and following the lines traced by the first two sheets. When you have completed this step, continue laying horizontally.



### 2 FINISHING

When you have finished laying on either side of the "shoulder", you can start on the rounded section. In this case, lay the previously prepared strips of mosaic and, when necessary, insert single suitably shaped single tiles cut with the mosaic pliers. Remember that all tiles cut with pliers should be buffed with sand paper or a diamond tipped disc to soften the cut edge. This task is not possible with Gloss and Oro mosaic. You can now go ahead with the usual grouting and cleaning procedures taking extra care on rounded sections.



## FOLDS



### 1 PREPARATION

It is very important that corners are perfectly square otherwise laying becomes very complicated and time consuming. Particular expertise is called for when laying mosaic in awkward corners. The first step involves laying a first sheet of "dry" tiles. Position the sheet against the upright section of the corner. Count the number of tiles in the curved section and mark the paper backing with a pencil as shown in the illustration. In this case, there are three tiles.



### 2 REMOVING EXCESS TILES

Use the smooth trowel to cut nine strips of tiles (three deep by three wide) and lay them dry against the surface letting the strips slide towards the floor until both ends touch. Use a pencil to trace a light perfectly horizontal line above the dry sheet then, shine the light from the laser on the surface to provide the lines to follow for laying the mosaic.



### 3 LAYING THE MOSAIC

After applying the adhesive, lay the first sheet (the one with the upside down U shape) in the lower middle section then continue horizontally to the right and left. Proceed along the surfaces starting from the preciously laid sheets so as to keep the joints properly aligned.



### 4 FINISHING

To complete the job, lay the missing mosaic in the corner. To do this, cut the tiles to shape as accurately as possible so that they blend in perfectly. Use the FLEX with the Bisazza diamond disc. On completion of this task, you can start the usual tile correcting, grouting and cleaning procedures.



## INSERTING A MOTIF ON THE BOTTOM OF A SWIMMING POOL

Before starting to lay the tiles, it is absolutely essential to establish with the customer exactly where and how the design is to go in the pool. These decorations are supplied paper mounted. Paper mounted mosaic is recommended for installation in swimming-pools, and as completion of pool bottoms. As we are dealing with swimming pools, this means that the substrate must be prepared with a waterproofing product that is compatible with Bisazza adhesive (contact a company that manufactures chemical products for the building trade). This product must be used for skimming before any other operation is performed.

### MOTIF AND MIXED TILES WITH PAPER BACKING



#### 1 DRAWING THE STARTING LINE

Having established the position of the motif using several sheets of both the motif itself and mixed tiles and using the edge of the pool as a point of reference, draw perpendicular lines with highlighted with coloured chalk. If the pool is an irregular shape, the reference lines will be provided by the axes of the motif.



#### 2 DRY LAYING

Start the dry laying (i.e. without adhesive) the various sheets of the design as shown in the laying plan. The paper backing on the sheets is numbered and has direction arrows to facilitate this task. Continue dry laying the mixed tiles which surround the modular design or motif.



#### 3 CUTTING SHEETS TO ACCOMMODATE THE MOTIF

To make the motif fit perfectly with the bottom of the swimming pool, lay the mixed sheets which surround the motif over the motif itself so as to see where any excess tiles have to be removed. Cut the paper on the sheets with a cutter and dry lay the mixed tiles which should perfectly match the shape of the design. Now all that remains is to re-number every single assembled tile so that you can reconstruct the pattern easily when the time comes for actual laying.



#### 4 LAYING THE MOSAIC

Once you have laid the tiles for the background colour following the lines marked out on the grid, you can lay the motif using the new numbers.



#### 5 OTHER STEPS

On completion of laying, you can start the usual procedures of removing the paper, tile correcting, grouting and cleaning.



