

ONIX[®]

ONIX GLASS MOSAIC
PLACING, MAINTENANCE
AND CLEANING MANUAL

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1. INTRODUCTION

Before deciding the type of covering that should be used for floors and facings - Inside, outside or in swimming pools - It is necessary to evaluate some aspects that should afterwards be translated into savings, wellbeing and respect for the environment.

The functional aspects of the Onix glass mosaic coverings make them a lot more advantageous than other alternative market products. Some of their advantages are the following:

- Durability. They remain unchanged throughout their shelf life. However, they will only be really durable if there is a correct selection of adhesive and joint material.
- Hygienic surface. Glass mosaic coverings have no porosity at all, and therefore they are perfect hygienic surfaces for as long as a correct joint material is used.
- They are stain resistant and easy to clean.
- Chemicals resistant.
- Frost resistant.
- Excellent performance before water and humidity.
- Optimum performance before fire, heat and light.
- Ecological Value. Made of recycled and non-polluting materials
- Less global cost.

important!

Please note the Importance of choosing the right adhesive and joint material so as to ensure the durability. Should this condition not be respected, all other product features could be seriously affected.

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When this or other important aspects (like the placing system, putting into effect or support status) have not been correctly done, they have caused serious short and mid-term damages, thus turning a good covering system into an extra economic cost work.

2. PREPARING THE SUPPORT

In order to obtain the best result when placing the coverings, it is essential to know the technical features of both the support and the glass mosaic.

The best way to get a perfect adhesion to the support, this has to be totally free of dust, grease, paint, efflorescent, whitewash, plaster remains or any other substance that might damage the adhesion of the glass mosaic.

leveling support

The support (wall or floor) to be covered must be perfectly leveled; it is advisable to use specific leveling products for levels of more than 5 mm measured with 2m. Ruler, because covering with a light layer technique does not allow correcting the support drop due to an excess of adhesive, and so it is essential to ensure that the surfaces are perfectly flat. Do not forget that the Onix glass mosaic covering will show any support unevenness, something you shall really take into account before ignoring this advice.

3. PLACING TECHNIQUES

To place the Onix glass mosaic, it is highly advisable to use the light layer technique with a flexible adhesive.

4. JOINT MATERIAL

Before choosing the joint material it is necessary to carefully consider the following:

- As glass mosaic will be placed on a support, we need to analyze the support features, current state and performance.
- The Onix glass mosaic features (Onix glass mosaic has 0% water absorption).
- The weather conditions the covering will be subject to.
- The usage of the product with respect to mechanical and chemical resistance and water action.

in accordance with regulation 12004, please use concrete glue like C2 glue

In accordance with **regulation 12004**, It is advisable to use **white concrete glue like C2 glue**. This is extremely important if we wish to maintain the color of the Onix glass mosaic, due to the translucence of our products.

5. GLUING PROCESS

If a long-lasting Gluing is to be achieved, please take into account the following:

- When preparing the glue, you should strictly follow the manufacturer's instructions for the preparation of the glue.
- Prepare the mixture by means of low-speed mechanical beating, so as to ensure getting a homogeneous and lump less product.
- The gluing process must always be done under the most mild and favorable weather conditions:

you should not forget that

- * Temperatures for use must be between +5°C and +30 °C

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- * Never apply when there is risk of frost, direct sunshine or during periods with maximum heat. Should the weather conditions be very hot, it is highly advisable to moisten the support.
- * Do not apply with rain.
- * Wind diminishes the open time of the joint material.

how to apply the glue

- Use the smooth side of the trowel to evenly spread the glue on the support, and do not cover surfaces bigger than 2m² at once. Then comb the concrete glue with the serrated side of the trowel (with a teeth line of 3, 5 mm). We advise you not to cover too big surfaces with the adhesive, so as to avoid getting a superficial adhesive film on top of the surface to be covered.

5.1. GLASS MOSAIC ON PAPER

Apply the Onix glass mosaic sheets with the paper side facing the worker. Always press the paper in the same direction, and beat the tile pieces with a rubber trowel to ensure a perfect adhesion.

The distance between the sheets must always be the same as the distance between each tile piece of the glass mosaic, so as to ensure that all the joints are equal.

Once the adhesion will be consistent enough, use a wet sponge to moisten the sheets of paper until they unstuck easily from the tile pieces. This must be done with care, as the concrete glue is still fresh at this stage of the operation. Then tear off the sheet of paper by pulling it from an angle, toss it diagonally and try to lift it as little as possible from the support, carefully avoiding to unstuck tile pieces.

Alignment defaults can be corrected and excess of adhesive can be taken off by using a small bricklayer's trowel before the glue gets dry. You must repeat all the phases of this operation until completing the whole covering surface. Before proceeding to the joint phase, let the glue dry during the time indicated by the manufacturer.

5.1. GLASS MOSAIC ON PVC OR MESH

Place the sheet on the surface by pressing with a rubber trowel. Make sure that the distance between the sheets is always the same as the distance between each tile piece of the glass mosaic, so as to ensure that all the joints are equal.

Before proceeding to the joint phase, let the glue dry during the time indicated by the manufacturer.

Recently covered areas must be clearly protected and indicated, so as to avoid walking on the pavement before the adhesive is completely dry following the manufacturer's instructions.

6. HOW TO PLACE THE JOINTS

The joints have a very important aesthetic function, as they enhance the beauty of the Onix glass mosaic and make up for any small dimensional variations.

Joint mortars reduce the covering movements and tensions, improve the global adherence of the Onix glass mosaic and prevent the water from getting to the support.

Joints are part of the covered surface, and the jointed material is exposed to the same aggressions as the Onix glass mosaic. Therefore, since the joints are exposed to chemical aggressions then the joint mortar must also be chemical resistant.

how to choose the joint material

There is a wide offer of joint materials, all of which can adapt to different environments: water-proof, damp-proof, distortion resistant, acid resistant, etc. In compliance with the European regulation **EN13888**, the use of a reactive resin joint mortar (like the **RG** mortar) is highly recommended. Its main features are:

- Chemical products resistant
- Germ resistant.
- High adherence.
- Excellent damp resistance
- Excellent burn resistance.
- Joints can contain pigments in order to obtain different colors.

a great variety of joint colors

7. HOW TO APPLY THE JOINT MATERIAL

Joints must be clean, dry and free of dust. Should there be an excess of adhesive during the covering process, it should be taken off while still fresh.

Before the joint process, please ensure that the covering adhesive has hardened and that it has eliminated most of its dampness.

It is highly advisable to work in small areas. Spread the material with a rubber trowel, ensuring to correctly fill the joints without leaving holes. Use the same trowel to take off the excess of material.

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The product must dry until it loses its superficial shine. Then you can clean it with a water moistened sponge. Once the joint material has hardened, use a dry and clean cloth to clean the surface and eliminate any dust remains.

8. HOWTO CUT ONIX GLASS MOSAIC

The Onix glass mosaic tiles can be cut as follows:

- Piece by piece: using specific mosaic pliers.
- The whole sheet: using a Grinder with a diamond-hard disk of 10cm. First pencil mark on the paper the desired cuts (or mark them directly on the mosaic In the case of PVC and mesh), then cut the mosaic with the diamond-hard disk, cutting several times and more deeply each time, so as to avoid breaking the tiles.

9. FINAL CLEANING OF THE WORKS

Once the covering process is finished, it is advisable to take off any adhesive and joint remains with an appropriate commercial acid. However, the following general conditions are always to be taken into account:

- Acid should never be used to clean recently covered pavements, as acid reacts when in touch with non-hardened concrete, and so it could spoil the joints or leave insoluble elements on the covering surface.
- Before applying any chemical treatment, the surface should be moistened with clean water, so as to prevent the joint material from absorbing any of the used agents. After the treatment the surface should immediately be rinsed with water.

- Do not use metallic bricklayer's trowels or abrasive sponges.
- The above operations should always be accomplished by specialized workers, in strict compliance with the pavement features and the manufacturer's indications.

Finally, please bear in mind that placing the pavement is not the last phase of the work. Therefore, and in order to correctly protect your pavement from any eventual harm that later works could cause, it should be covered with cardboard, thick plastic or sawdust layer.

10. DAILY MAINTENANCE AND CLEANING

Common neutral detergent is perfect for daily cleaning. Do not use wax, oil, fluorhydric, phosphoric or orthophosphoric acid.

Should an extraordinary cleaning be necessary, then use a lightly acid detergent, but always follow the manufacturer's recommended use and dosage instructions. Then rinse several times with a lot of water.

11. HOW TO COVER SWIMMING POOLS WITH ONIX GLASS MOSAIC

On top of the general instructions to be followed when covering a swimming pool with glass mosaic, there are some other specific glass mosaic use conditions to be taken into account. Therefore, please bear in mind the following advises:

- receptacle capacity test**
 - Before covering with glass mosaic, test the capacity of the receptacle so as to check its stagnation and evaluate if it needs a waterproofing treatment (leveling products are not water proof). It is also recommended to carry out a structure static test.
- protection from sunlight and rain**
 - Work must be protected from sunlight and rain. It is essential to avoid water stagnation during at least 20 days after covering a surface. This protection will also ensure that the temperature in the receptacle is kept between 5°C y 30°C at the beginning of the works and during at least 10 days after the end of the works.
- how to eliminate remains**
 - All remains of chemical products or remains of Iron planes, concrete jagged edge, etc. are to be thoroughly removed to ensure a perfect adhesion of the concrete glue.
- angles in the corners**
 - It is highly advisable to round all vertical and horizontal angles with a radio higher or equal to 30mm. for glass mosaic on paper, and 50mm. for glass mosaic on PVC or mesh. This will ensure the mosaic continuity between bottom and walls.
- for swimming pools with concrete bottom**
 - When covering concrete swimming pool bottoms with Onix glass mosaic, it is advised to comply with the European regulations **EN 12004** by using concrete glue like **C2TE**, or at least use dispersion adhesive or a reactive resin adhesive.
- how to place the joints in thermal swimming pools**
 - Indicated by the European regulation **EN 13888**, the joints in thermal swimming pools should be done with a joint mortar of reactive resins (like the **RG** type), due to the very specific aggressive effects of the thermal swimming pools' water substances.
- wait for at least 20 days**
 - After the glass mosaic has been placed before filling the swimming pool.

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