

FILLGEL PLUS

1	DESCRIPTION
	<p>High performance epoxy grout for Bisazza Glass Mosaics, washable with water.</p> <p>Fillgel Plus is a half-transparent bi-compound epoxy paste, made up of epoxy resins, silica compounds and special additives. It has a high wear resistance, it's easy to apply and to clean with UV resistance.</p> <p>Once dry and hardened, Fillgel Plus has the following characteristics:</p> <ul style="list-style-type: none"> - smooth and compact final surface - uniform colors resistant to tone variation - improved resistance to yellowing due to UV rays - water resistant - high-hardness and resistant to high traffic - free from any cracks and leaks - excellent adherence to the mosaic tesserae <p>The accurate qualitative and granulometry selection of the compounds, allows one to obtain a surface with a particularly shiny and reflective finish.</p>

2	APPLICATIONS
	<p>To grout Bisazza mosaics on walls and floors. Suitable for interior and exterior applications. Suitable for wet and permanent wet areas, such as pools, and in areas where a total hygiene is required. The grout color will affect the final aesthetic appearance of the product installed.</p>

3	TECHNICAL CHARACTERISTICS	
	Color	Comp. A: colored paste (see color board) Comp. B: to be mixed at the use Package for a total of 3 kg.
	Bond nature	Epoxy-polyaminoamidic
	Classification according to EN 13888	RG Class
	Specific catalyzed weight	1,05 ± 0,1 kg/dm ³
	Catalysis ratio	2:1 in weight
	Temperature of application	From + 15 °C to +30 °C
	Starting cleaning	Within 30 minutes /30°C Within 50 minutes /20°C Within 2 hours /15°C
	Washability with water	Excellent
	Walking time	After 24 hours, with lower temperatures time is longer*
	Ready for use	After 7 days, with lower temperatures time is longer*. In pools and humid environments, wait for 14 days.
	Working temperature	From -15°C to +70°C

*In the meantime, avoid water stagnation.

NOTE: The above reported data were taken at a temperature of +23°C with 50% humidity. Higher temperatures reduce the above mentioned working times.

4 FINAL PERFORMANCE		
Determination of resistance to abrasion		≤ 250 mm ³ UNI EN 12808-2
Determination of flexural strength		≥ 30 N/mm ² UNI EN 12808-3
Determination of compressive strength		≥ 45 N/mm ² UNI EN 12808-3
Determination of shrinkage		≤ 1,5 mm/m UNI EN 12808-4
Determination of water absorption		≤ 0,1 g UNI EN 12808-5
VOC emissions in accordance with the French decree ⁽¹⁾		Class A+ (Arrêté 2011-321 Annexe I-D)
Fungal colonisation (BS 5980)		no visible growth
Assessment of the effect of light exposure		Gray scale ⁽²⁾ (UNI EN 15187): 4

⁽¹⁾ Information on the emission level in the interior of volatile organic compounds, which present a risk of inhalation toxicity; on a class scale from A + (very low emissions) to C (high emissions).

⁽²⁾ The gray scale is a contrast scale ranging from 1 (maximum contrast) to 5 (no visible variation).

5 STORAGE		
Storage		Store in dry and cool area, in original unopened packaging. Shelf life: 24 months. The expiry date is printed on the packet.
Packaging		Part "A" and Part "B" to be mixed at the time of use - total 3 Kg.

6 INSTRUCTIONS FOR USE	
<p>Preliminary steps</p> <p>Make sure that the joints are clean and free from any dust or debris; failure to do so will prevent the grout adhesion ie. oils, grease, cement powder, or other residuals.</p> <p>For a correct sealing of the mosaic with Fillgel Plus, the joints must be free. If they are not, remove the adhesive in excess prior to grouting. Start grouting with Fillgel Plus only when the adhesive used for fixing is completely dry. Never wet the joints before application of the grout Fillgel Plus.</p> <p>In case of paper face mounted mosaic, we recommend removing with a wet sponge any remaining adhesive from the surface of the tiles, before grouting.</p> <p>When installation is made in submerged areas, in order to avoid any possible bacterial proliferation, we suggest to sanitize the 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, check that the joints are perfectly dry.</p> <p>Preparation of the product</p> <p>Pour component B in the A component container. Mix for about 1 minute using an electric mixer equipped with helicoidally beater at low turning number (400-600 rpm), obtain a homogeneous paste. Hand mixing is not recommended.</p> <p>Scratch with a trowel the walls and bottom of the container in order to avoid traces of unmixed products. Complete the process mixing for 30" further. Pour component B in the A component container. Mix for about 1 minute. Pour the mixture in a clean bucket and mix further. Proceed with the application of the grout.</p> <p>Application</p> <p>Spread Fillgel Plus by using a rubber trowel, filling the joints and checking that the bubble of air are completely removed. If necessary, repeat the operation twice.</p> <p>Remove immediately the excess of product keeping the trowel almost perpendicular with respect to the surface and diagonal with respect to the joints, then proceed with the cleaning operations.</p> <p>Cleaning</p> <p>Cleaning must start immediately after grouting and within 50 minutes (since the mixing of the two compounds) at 23°C. Higher temperatures reduce the time for the cleaning operations.</p> <p>Emulsify the excess of grout with Bisazza Scrub soaked only with water and keep it clean with frequent rinsing.</p> <p>For a better execution of this operation, we recommend the use of a trowel with "velcro" stripes, with a rotating motion and with a gentle pressing avoiding emptying the joints.</p> <p>Remove the emulsion with Bisazza Sponge moistened only with water and keep it clean with frequent rinsing. Change the scrub and the sponge when they look oily or sticky; usually, every other 4/5 sqm.</p> <p>Avoid allowing the cleaning liquid to penetrate in the joints. Keep the tools clean with clean water.</p> <p>After a few hours (not less than 4, and not more than 15 hours), remove any possible halos with Bisazza scrub and clean water. Any other over grouting can be made when the surface is totally dry.</p>	

7 AVERAGE CONSUMPTION OF FILLGEL PLUS (Kg/sqm)	
20x20 mm	1,45
10x10 mm	1,45
VARIATIONS	1
OPERA 15	2,3
OPERA 25	1,6
5X5	1
OPUS ROMANO 12	1,2
VINTAGE	1
Decorations in artistic technique 10x10 mm	1,0 - 1,45
Decorations in artistic technique 20x20 mm	1,45

The consumption quantities reported above are calculated for a professional installation using the correct Bisazza fixing tools and guides.

8 REMARKS	
<ul style="list-style-type: none"> - Avoid the use on surfaces subject to permanent contact with oleic acid. - Respect the split and/or expansion joints by sealing them with a specific product. - Fillgel Plus is not a waterproof product. - Any addition of water or solvent will compromise the performance of the product. - Mix well the two components (A+B) to avoid altering the performance of the product - Do not use portions of the product - Over time, clearer colors tend to turn yellow, when used outside. - Fillgel 1104 neutro base cannot be used outdoors and in outdoor swimming-pools. - Slight shade variations between different batches may occur. - Working time varies according to environmental conditions and substrate. - Do not use the product when the substrate temperature is below +12°C or higher than +30°C. - Carefully respect the mixing ratio 2:1 in weight. - Wait at least 14 days (at 23°C) after the installation to put the surface in contact with water. - Do not cover the grouted surfaces unless at least 4 days from the grout application have passed. - In case of applications on heated substrates, the instructions released by the supplier of the heating system must be followed. 	

9 RESISTANCE TO CHEMICAL AGENTS																									
Evaluation of resistance of Fillgel Plus to chemical solutions. Tests performed according to the norm UNI EN 12808-1.																									
	<table border="1"> <thead> <tr> <th>solutions / conditions</th> <th>continuous immersion for 28 days</th> <th>sporadic contact</th> </tr> </thead> <tbody> <tr> <td>Hydrochloric acid 1%</td> <td>++</td> <td>no change</td> </tr> <tr> <td>Sodium hydroxide 2%</td> <td>+</td> <td>no change</td> </tr> <tr> <td>5 mg/l Cl₂</td> <td>no change</td> <td>no change</td> </tr> <tr> <td>10 mg/l Cl₂</td> <td>+</td> <td>no change</td> </tr> <tr> <td>Sodium hypochlorite 15%</td> <td>+++</td> <td>++</td> </tr> <tr> <td>Hydrogen peroxide 65 mg/l</td> <td>no change</td> <td>no change</td> </tr> <tr> <td>Hydrogen peroxide 10%</td> <td>+++</td> <td>++</td> </tr> </tbody> </table>	solutions / conditions	continuous immersion for 28 days	sporadic contact	Hydrochloric acid 1%	++	no change	Sodium hydroxide 2%	+	no change	5 mg/l Cl ₂	no change	no change	10 mg/l Cl ₂	+	no change	Sodium hypochlorite 15%	+++	++	Hydrogen peroxide 65 mg/l	no change	no change	Hydrogen peroxide 10%	+++	++
solutions / conditions	continuous immersion for 28 days	sporadic contact																							
Hydrochloric acid 1%	++	no change																							
Sodium hydroxide 2%	+	no change																							
5 mg/l Cl ₂	no change	no change																							
10 mg/l Cl ₂	+	no change																							
Sodium hypochlorite 15%	+++	++																							
Hydrogen peroxide 65 mg/l	no change	no change																							
Hydrogen peroxide 10%	+++	++																							
Legend: + slight change ++ visible change +++ strong change																									

10	SAFETY WARNINGS
	<ul style="list-style-type: none">- Product for professional use only, keep out of the reach of children.- Irritant for the eyes, respiratory tracts and skin.- May cause irritation in contact with the skin.- In the event of contact with eyes, wash immediately with plenty of water and consult a doctor.- Use protective clothing, gloves and goggles.- Use only in well ventilated areas.- Use only on perfectly dry surfaces. <p>Read the instructions reported on the packaging and consult the safety data sheet before using. The safety data sheet is available as a separate document.</p>

The information reported in this technical data sheet is based on our best experience and technical knowledge; however, it does not exempt users from prior tests and inspections to determine suitability of use. For further technical information or for specific cycles and / or special applications, please consult our TECHNICAL DEPARTMENT for assistance.
Product intended for professional use.