

# NOVAGROUT EPOXY

Acid resistant ceramic tile joint grout with "porcelain" finish

- ▷ To be mixed with 14 pigments for easier logistics
- ▷ Suitable also as acid resistant adhesive
- ▷ Excellent workability and cleaning with cold water
- ▷ For joint width 1 - 15mm
- ▷ For both wall and floor applications
- ▷ High mechanical strength
- ▷ Perfect solution for industries, swimming pools and tanks with chemicals
- ▷ Extremely smooth finish
- ▷ VOC 0,1g/cm<sup>3</sup>



## Description

NOVAGROUT EPOXY is a whitish, acid resistant, two component epoxy system which when mixed with EPOCOLOR (pigment in powder form), creates a paste which can be applied and cleaned easily on both horizontal and vertical surfaces inside joints between tiles by means of a rubber spatula in a minimum thickness of 1mm. EPOCOLOR is available in 14 colours as shown in the NOVAGROUT COLOR CHART. This epoxy system is the ideal solution for grouting coverings that require high mechanical and chemical resistance. Due to its high mechanical strength and resistance to chemicals, this grout is specially recommended for demanding applications such as tiling in industries, swimming pools, hospitals. In addition to that, NOVAGROUT EPOXY, mixed or not, with EPOCOLOR can be used as acid resistant tile adhesive

## Typical Applications

NOVAGROUT EPOXY is suitable for grouting tiles on both walls and floors, in:

- Bathrooms, toilets, showers, steam baths, built-in showers and saunas
- Under-floor heating system applications (with the exception of expansion joints)
- Kitchen walls and floors
- Surfaces subject to chemicals and various acids
- Breweries, butcheries and milk factories
- Swimming pools and tanks containing chemicals
- Shopping Centers, Hotels and floors with heavy traffic
- Walls and floors in hospitals
- Fixing and grouting of glass mosaic in one single action inside swimming pools. This system is not recommended for mosaics with paper support.

## Application Procedure

### Preparing the joints

Make sure that the adhesive used for applying the tiles, has set and that the humidity has completely evaporated. The joints must be dry, clean and free of dust, otherwise the adhesion between the NOVAGROUT EPOXY and the tile will be compromised. The joints and the substrate must be dry wet when grouting with NOVAGROUT EPOXY. The edges of the joints must be completely free of traces of cement based materials, in example tile adhesive or old grout, otherwise they may be affected from the chemicals used on the surface and compromise the adhesion of NOVAGROUT EPOXY and the tile. The joints have to be clean till the base of the tiles in order to be filled easily with the NOVAGROUT EPOXY and not to empty partially during the cleaning procedure. The minimum width of the joint has to be 1mm.

### Preparing the mix

Pour the catalyst (comp.B) in the container of component A and mix by means of an electric mixer in low rpm (400 - 500 r.p.m.). Note that if mixing is done in higher r.p.m. the pot life and workability is reduced. Add the 450gr of EPOCOLOR and mix again in the same way until a smooth, free of lumps, paste is obtained. The mixing time must be 3 - 5 minutes.

The proportions are pre-dosed, so never mix partially the components otherwise there is danger that setting time will be compromised. Not proper mixing can also lead to a colour different than the one expected. It is recommended that the product should be stored in a dry and cool area before application. This could prolong the pot life of the product, especially during hot days. NOVAGROUT EPOXY has a relatively long open time but if in any case the product starts to set inside the bucket and its viscosity makes it impossible to be applied in the joints, then the product should be disposed. Addition of water, alcohol or other solvents is not allowed in any case. When NOVAGROUT EPOXY is used as tile adhesive, in order to reduce the application thickness, we can mix only components A+B without EPOCOLOR. In case we want to add color to this (A+B) mix we can use NOVACOLOR OXIDE. In case where we want to achieve a sparkling effect then we can add to the (NOVAGROUT EPOXY + EPOCOLOR) mix, 250gr - 300gr GLITTER or SWAROFSKI type granulates (for every 5kg mix). For additional information refer to the relevant Technical Data sheets of the products.

### Use as joint grout

Apply the mix by means of an appropriate rubber spatula making sure that the joints are completely filled. This must be done by passing the trowel diagonally over the tile joints. The excess material is removed with the spatula and is used to fill the next empty joint. While doing this take care not to remove grout from the tile joint. Working time and setting time, depend on the temperature of the environment as well as the temperature of the material and the application substrate. The ideal application temperature is between +18°C and +23°C. The application temperature can be also between +12°C and +30°C. Grouting in temperatures lower than +12°C will significantly slow down the setting time. On the other hand when grouting in temperatures higher than +30°C the setting time is accelerated making difficult for the applicator to catch up his work since the mix starts to harden, faster. Floors can be set to light foot traffic after 24 hours (at +23°C & R.H. 55%). At temperature +16°C this time is tripled (72 hours). Joints achieve their final mechanical and chemical strength after 7 - 10 days (at +23°C & R.H. 55%).

### **Cleaning - "First Pass"**

Cleaning can take place while the product is still fresh by using plenty of clean cold water, taking care not to remove material from the joint. Clean the application surface with a wet sponge suitable for epoxy grouts immediately after the application and take care that the cleaning water doesn't go to empty joints because this will compromise the adhesion between the grouting material and the tile. If for any reason (hot weather, application delays etc.) the grout starts to set on on the tiled surface making cleaning difficult, add a small quantity of alcohol on the water used for cleaning.

### **"Finishing" of the joint - "Second Pass"**

Straight after the initial cleaning of the tile surface with the suitable for epoxy grouts "hard" sponge and while the NOVAGROUT EPOXY is still plastic inside the joints, it is recommended to make a second "finishing" pass by means of an appropriate "soft" sponge. This work is indispensable because the dirt will accumulate on the joint surface if the joint has a rough finish with superficial porosity. If this occurs this dirt is not easily removable and the future maintenance of the joint becomes difficult. For large application surfaces cleaning can be done with appropriate cleaning machine. NOVAGROUT EPOXY residues can be removed by using CLEAN-COLL or ALCALINE CLEANER. For additional information refer to the relevant products Technical Data Sheets and contact our Technical Department.

## **Use as epoxy adhesive**

### **Substrate Preparation**

Use an appropriate notched trowel depending on the size of the tile and the form of the substrate. Apply the mix in the same way as if it was a common tile adhesive. Absorbent substrate (with max humidity content of 4%) should be primed with WATER PRIMER EPX. Non absorbent substrates (like in example existing ceramic tiles) should be primed with PLANOPRIMER EPOXY. In any case the application of the adhesive must take place within 2 - 18 hours. In wet areas like external, bathrooms, swimming pools, the substrate must be waterproofed first by using SC ELASTIC or SC 200 PENETRATE depending on the type of application. For additional information refer to the relevant materials Technical Data Sheets. For fixing and grouting mosaic on a support net (not paper) in one single action we apply first the necessary quantity of NOVAGROUT EPOXY on the substrate for complete covering the back of the mosaic and also to fill the joints and then we place the mosaic sheet on the adhesive bed. After we secure that the mosaics are properly placed we clean the tile surface with cold water in the appropriate quantity by means of a suitable for epoxy grouts sponge as described above.

### **Storage**

NOVAGROUT EPOXY remains stable for at least 12 months in the original sealed packaging stored inside and protected from frost and direct sunlight.

### **Packaging**

NOVAGROUT EPOXY (two component epoxy paste) in 4,55kg buckets and EPOCOLOR (pigment and sand in powder form) in 450gr buckets.

### **Recommendations**

- Mixing of the two components must be done in low rpm (max 500 rpm) otherwise the setting time in the pot (pot life) will be accelerated. It is recommended to apply the product in temperatures between +18°C and +23°C.
- Do not use the product in lower temperatures than the recommended and when humidity exceeds 75%. In this way we avoid white spots in the surface that might cause discolorations.
- Do not leave residues after the application in the tiles surface. Once hardened, it is very difficult to remove and this can be done by using CLEAN-COLL or ALCALINE CLEANER. In such cases contact our Technical Support.
- The components of the epoxy grout are pre-dosed, so do not mix partially the two components.
- The cleaning water must be drinkable and changed frequently.
- Avoid grouting tiles with absorbent surface (cotto, etc.) it is recommended to make a cleaning test prior to the application).
- Do not apply in industries where oleic acid is used. In case of doubts contact our Technical Support.
- Never mix the epoxy grout with water or solvents.
- Do not cover the epoxy grouted surfaces with plastic film or other coverings that might cause water vapour condensation.
- Exposure of the joints to UV radiation can cause in the long run some discoloration.

- Always wear gloves during the application and avoid direct contact of the skin with the cleaning water.
- Do not use NOVAGROUT EPOXY in expansion joints, in such cases use PU 500 or NOVACOLOR NR.
- Always use professional and clean tools for applications and cleaning.

### **Warning**

The technical data and recommendations contained in this leaflet correspond to the best of our knowledge and experience. All the above mentioned information in any case should be considered as merely indicate and subject to confirmation after long term practical applications. For this reason anyone interested of using the product must be sure before hand that the product is suitable for the envisaged application. In every case the user alone is fully responsible for any consequences deriving from the use of the product. We retain the right of renewal of the data of the leaflet without warning. For the latest and valid version of the Technical Data Sheet refer to use website [www.novamix.gr](http://www.novamix.gr) or directly to the following QR code of the product.

### **ONLY FOR PROFESSIONAL USE**

# CHEMICAL RESISTANCE OF NOVAGROUT EPOXY

WHEN USED AS GROUT MATERIAL ACCORDING TO EN 12808

CHEMICAL SUBSTANCE		USE					
GROUP	NAME	CONCENTRATION %	24 HOURS	7 DAYS	14 DAYS	28 DAYS	
ACIDS	Acetic acid	2,5	+	+	+	+	
	Hydrochloric acid	25					
	Citric acid	10					
			2,5				
			5				
	Lactic acid	10					
	Nitric acid	25					
	Pure oleic acid	1,5					
	Sulphuric acid	25					
	Tartaric acid						
Oxalic acid							
ALKALIS	Caustic soda	50	+	+		+	
	Sodium hypochlorite in solution						
	Potassium hydroxide	50	+	+	+	+	
SATURATED SOLUTIONS AT +20°C	Calcium chloride		+	+	+	+	
	Sodium chloride		+	+	+	+	
	Sugar		+	+	+	+	
OILS AND FUELS	Gasoline		+	+	+	(+)	
	Turpentine		+	+	+	+	
	Olive oil		+	+	+	+	
	Fuel oils		+	+	+	+	
SOLVENTS	Diethylene Glycol		+	-	-	-	
	Glycerine		+	+	+	+	
	Benzene		+	+	+	+	
			1	+	+	+	+
			10	+	+	+	+
	Hydrogen peroxide	25	+	+	+	+	

# TECHNICAL DATA

## Product Identification

Consistency	Comp. A beige paste Comp. B yellowish liquid
Color see color chart	00, 10, 11, 13, 14, 20, 30, 31, 32, 35, 41, 42, 44, 73
Specific gravity	1,45gr/cm <sup>3</sup>
Storage	12 months
Working time at 23°C	45 - 60 min
Temperature application range	from +12°C to +30°C
Recommended application temperature	from +18°C to +23°C
Walkability	after 24 hours (+23°C)
Mechanical and chemical cure time	after 7 - 10 days
Joints width	from 1 to 15mm
Tiles grouting	after 7 - 10 days when ordinary adhesive has been used. after 24 hours when fast setting adhesive has been used in floor applications
Temperature in use	from 20°C to +100°C
VOC	0,1g/cm <sup>3</sup>

## Final Performances EN 12004:2007 +A1:2012

Resistance to abrasion EN 12808-2	≤ 25 mm <sup>3</sup> ≤ 250 mm <sup>3</sup>
Flexural strength after storage in dry conditions EN 12808-3	≥ 35 N/mm <sup>2</sup> ≥ 30 N/mm <sup>2</sup>
Compressive strength after storage in dry conditions EN 12808-3	≥ 65 N/mm <sup>2</sup> ≥ 45 N/mm <sup>2</sup>
Shrinkage EN 12808-4	≤ 0,9 mm/m ≤ 1,5 mm/m
Water absorbency after 240 min EN 12808-5	≤ 0,005 g ≤ 0,1 g
Initial shear adhesion strength EN 12003	≥ 11 N/mm <sup>2</sup> ≥ 2 N/mm <sup>2</sup>
Adhesion after water immersion EN 12003	≥ 9,5 N/mm <sup>2</sup> ≥ 2 N/mm <sup>2</sup>
Adhesion after thermal shock EN 12003	≥ 2,8 N/mm <sup>2</sup> ≥ 2 N/mm <sup>2</sup>
Slippage EN 1308	≤ 0,1 mm ≤ 0,5 mm
Extended workability (adhesion after 20 min) EN 1346	≥ 5 N/mm <sup>2</sup> ≥ 0,5 N/mm <sup>2</sup>
Resistance to fire EN 13501	E Euroclass

# COVERAGE TABLE (kg/m<sup>2</sup>) DEPENDING ON THE SIZE OF THE TILE AND WIDTH OF JOINTS

Width of the joint (mm) Size of the tile	3		5	
	100 x 100 x 6	0,6	1,0	
100 x 100 x 10	1,0	1,6		
100 x 200 x 6	0,5	0,8		
100 x 200 x 10	-	1,2		
150 x 150 x 6	0,4	0,7		
200 x 200 x 8	0,4	0,7		
120 x 240 x 12	-	1,2		
250 x 250 x 12	-	0,8		
250 x 330 x 8	0,3	0,5		
300 x 300 x 8	0,3	0,5		
300 x 300 x 10	0,4	0,6		
300 x 600 x 10	0,3	0,4		
330 x 330 x 10	0,3	0,5		
400 x 400 x 10	0,3	0,4		
450 x 450 x 12	-	0,5		
500 x 500 x 12	-	0,4		
600 x 600 x 12	-	0,4		



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