

Professional, superior-technology, three-component, water-resistant epoxy system, suitable for the high mechanical resistance grouting, at high concentrations of organic acids and aromatic hydrocarbons, of joints from 5 mm to 20 mm in homogeneous and ceramic tile floors.



FUGABELLA® EPOXY HP

SUPERIOR CHEMICAL RESISTANCE – Floors in the food and manufacturing industries and environments requiring a high degree of protection and superior resistance to chemical attack from the high concentrations of organic acids and aromatic hydrocarbons must be grouted with a technologically advanced product. The FUGABELLA® EPOXY HP technology ensures superior levels of resistance on permanent contact with chemically aggressive substances through the mix of pure epoxy, thermo-hardening, closed reticulation resins and reactive fluidifying agents used.

HIGH MECHANICAL RESISTANCE – The compactness, surface hardness, inabsorbency and good resistance to acids make it suitable for floors in environments subject to a high degree of static and dynamic stress. The FUGABELLA® EPOXY HP technology generates professional and longer-lasting seals that are essential to ensure the lasting performance of high-resistance floors.

SOLVENT-FREE – The superior technology of FUGABELLA® EPOXY HP is guaranteed by the exclusive use of thermo-hardening, pure epoxy resins and solvent-free, reactive fluidifying agents.

Developed by the Research and Development Division and guaranteed by the Training Centre.
Compliant with the CARE Project for the Protection of Health and the Environment:
Laying Division (Method M3 – Action P305).

FUGABELLA® EPOXY HP

AREAS OF USE

Water-resistant grouting of joints from 5 to 20 mm with high chemical and mechanical resistance and a high level of hardness.

Materials:

- homogeneous tiles, ceramic tiles and klinker of all types and formats

Use

Indoor and outdoor flooring in civil, commercial and industrial applications and street furniture subject to permanent or occasional contact with chemical substances, in environments subject to heavy traffic, swimming pools, thermal water baths and fountains, also in areas subject to thermal shock and freezing.

Do not use

On joints less than 5 mm or more than 20 mm in width, on porous flooring for which more specific or alternative chemical resistances are required compared with those listed in the chemical resistances table, to grout elastic expansion or fractionizing joints or on substrates that are not fully dry and subject to moisture rising.

PREPARATION OF SUBSTRATES

Before grouting joints, check that tiles have been laid correctly and are anchored perfectly to the substrate. Substrates must be perfectly dry. Grout joints in accordance with the recommended waiting time indicated on the relative data sheet for the adhesive used. For mortar substrates, wait at least 7-14 days depending on screed thickness, ambient weather conditions and on the level of absorption of the covering and the substrate. Any water or moisture rising can cause vapour pressure to accumulate, which may in turn loosen the tiles on account of the complete inabsorbency of the grout or of the tiles themselves.

Joints must be free from any excess adhesive, even if already hardened. Furthermore they must be of an even depth on the whole width of the tile covering, thereby ensuring maximum chemical resistance.

Any dust and flaky parts must be removed from joints by carefully cleaning them with electric dust extraction equipment.

Before grouting joints, check the cleanability of the tile covering, as porous or highly microporous surfaces may make cleaning difficult. It is advisable to perform a preliminary test on tiles not to be laid or in a small, concealed area. In this cases we recommend treating the covering with specific protective products, being careful to avoid applying it to the joints.

ABSTRACT

Chemical and mechanical high-resistance grouting of ceramic or homogeneous tiles must be performed with a professional, superior-technology waterproof grout with high level of hardness, compliant with EN 13888 - Class RG, such as FUGABELLA® EPOXY HP manufactured by Kerakoll. Joints must be dry and free from traces of adhesive and flaky parts. Use a hard rubber or metal float to apply the grout and suitable sponges damped in a solution of clean water and ethyl alcohol to clean joints on completion. Joints of ____ mm width and tiles ____ x ____ cm in size will lead to an average coverage of ≈ ____ kg/sq.m. Existing elastic expansion and fractionizing joints must be respected.

INSTRUCTIONS FOR USE

Preparation

Prepare FUGABELLA® EPOXY HP by mixing Part A, Part B and Part C from the bottom upwards with a low-rev ($\approx 400/\text{min.}$) helicoidal agitator. Pour Part B into the bucket containing Part A and homogenize the two fluids. Then add the quartz mineral filler (Part C) in accordance with the preset ratio of 1.5 : 0.75 : 7.75 and mix carefully until a smooth, even coloured mixture is obtained. Mix only enough filler for use within 30 min. at 23 °C / 50% R.H. FUGABELLA® EPOXY HP product buckets must be stored at a temperature of ≈ 20 °C for at least 2-3 days before use. Higher temperatures make the mixture too fluid and quicken hardening times, while lower temperatures make the mixture harder to spread and slow down setting times. At temperatures of less than 10 °C, the product will no longer set.

Application

FUGABELLA® EPOXY HP must be applied evenly on the tile covering with a metal or hard rubber spreader. Seal the joints by filling them completely. Remove most of the excess grout immediately using the spreader. Right after this, start to clean up the tile surface. To clean the tiles on completion, use a thick, hard and large-sized sponge (damped in a solution of clean water and 50% alcohol) to avoid removing grout from inside the joints. Use circular movements to soften the grout on the tiles and finish cleaning the joint surface. Specific high-dispersion polymers ensure all grout residues are removed using only a small amount of water, which would otherwise impair the final chemical resistances. Rinse the sponge frequently to ensure clean water is used at all times, using appropriate trays and grills with cleaning rollers. If necessary, replace the sponge or felt cleaning pad when saturated with grout. Finish cleaning up by dragging the sponge diagonally across the tiles to avoid going into the joints.

Cleaning

Residual traces of grout can be removed from tools with water before the product has hardened.

COVERAGE

	Format	Thickness	g/m ²	g/m ²	
			joint width 1 mm	5 mm	10 mm
Mosaic	2 x 2 cm	3 mm	≈ 755	≈ 3775	≈ 7550
	5 x 5 cm	4 mm	≈ 415	≈ 2075	≈ 4150
Tiles	10 x 10 cm	7 mm	≈ 370	≈ 1850	≈ 3700
Marble	15 x 15 cm	7 mm	≈ 245	≈ 1225	≈ 2450
	20 x 20 cm	8 mm	≈ 210	≈ 1050	≈ 2100
	30 x 30 cm	9 mm	≈ 160	≈ 800	≈ 1600
	40 x 40 cm	10 mm	≈ 135	≈ 675	≈ 1350
	50 x 50 cm	10 mm	≈ 105	≈ 525	≈ 1050
	20 x 20 cm	14 mm	≈ 490	≈ 2450	≈ 4900
	30 x 30 cm	14 mm	≈ 370	≈ 1850	≈ 3700
Cotto	30 x 30 cm	15 mm	≈ 265	≈ 1325	≈ 2650
Klinker	12.5 x 24.5 cm	12 mm	≈ 380	≈ 1900	≈ 3800

SPECIAL NOTES

When using FUGABELLA® EPOXY HP to grout joints in large surface areas, use suitable electrical equipment to reduce cleaning times. An electrical buffer with hard felt pad and cloth damped in ethyl alcohol ensures better coverage and a perfect finish.

Residual traces of hardened grout on inabsorbent floors can be removed by applying KERAGEL, a professional, thixotropic solvent gel, following the instructions for use.

TECHNICAL CHARACTERISTICS

Appearance:		
- part A	clear yellow liquid	
- part B	straw-coloured liquid	
- part C	pure white quartz	
Specific weight	Part A / B / C : $\approx 1.14 / \approx 1.05 / \approx 1.24 \text{ kg/dm}^3$	UEAtc
Chemical nature	Epoxy resin	
Granulometric interval	$\approx 100 - 800 \mu\text{m}$	
CARE	Method M3 – Action P305	
Storage	≈ 12 months in the original packaging	
Warning	Protect from frost. Avoid direct exposure to sunlight and sources of heat	
Packaging	Bucket 10 kg	

TECHNICAL DATA compliant with Kerakoll Quality Standard

Mixing ratio	Part A : Part B : Part C = 1,5 : 0.75 : 7.75	
Specific weight of the mixture	$\approx 1.66 \text{ kg/dm}^3$	
Pot life (at +23 °C)	≥ 20 min.	
Temperature range for application	from +10 °C to +30 °C	
Width of joints	from 5 to 20 mm	
Foot traffic	≈ 12 h	
Grouting after laying:		
- normal-setting adhesives	$\approx 24 - 48$ h	
- rapid-setting adhesives	$\approx 3 - 6$ h	
- mortar	$\approx 3 - 7$ days	
Interval before normal use	≈ 2 days (mechanical resist.) / ≈ 4 days (chemical resist.)	
Coverage	see Coverage table	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e. temperature, ventilation and absorbency level of the substrate and of the materials laid.

FINAL CHARACTERISTICS

Flexural strength after 28 days	$\geq 30 \text{ N/mm}^2$	EN 12808-3
Compressive strength after 28 days	$\geq 45 \text{ N/mm}^2$	EN 12808-3
Shear strength after 7 days	$\geq 2.5 \text{ N/mm}^2$	EN 12003
Resistance to abrasion	$\leq 250 \text{ mm}^3$	EN 12808-2
Water absorption after 240 min.	$\leq 0.1 \text{ g}$	EN 12808-5
Chemical resistance	see chemical resistance table	
Working temperature	from -40 °C to +110 °C	
Conformity	RG	EN 13888

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

WARNING

- **Product for professional use**
- use at temperatures between +10 °C and +30 °C
- use packages which have been stored for 2-3 days at +20 °C before use
- respect the preset mixing ratio of 1.5 : 0.5 : 7.75. For partial mixing, weigh the three parts precisely
- workability times may vary considerably, depending on environmental conditions and the temperature of the tiles
- protect the product from direct rain and sunlight for at least 6 hours after application
- do not lay on substrates subject to moisture rising or which are not perfectly dry
- if necessary, ask for the safety data sheet
- for further information please consult the **Kerakoll Worldwide Global Service +39-0536.811.516**

CHEMICAL RESISTANCE

ACIDS

	Concentration	Permanent contact	Occasional contact
Acetic	2.5 %	•••	•••
	5 %	•••	•••
	10 %	•••	•••
Hydrochloric	37 %	•••	•••
Citric	10 %	•••	•••
Formic	2.5 %	•••	•••
	10 %	•••	•••
Phosphoric	50 %	•••	•••
	75 %	•••	•••
Lactic	2.5 %	•••	•••
	5 %	•••	•••
	10 %	•••	•••
Nitric	25 %	•••	•••
	50 %	•	•
Oleic	100 %	•••	•••
Sulphuric	50 %	•••	•••
	100 %	•	•
Tannic	10 %	•••	•••
Tartaric	10 %	•••	•••

FOODSTUFFS

	Basic foodstuffs (temporary contact)
Vinegar	•••
Citrus fruits	•••
Ethyl alcohol	•••
Beer	•••
Butter	•••
Coffee	•••
Casein	•••
Chlorine	••
Glucose	•••
Animal fat	•••
Fresh milk	•••
Malt	•••
Margarine	•••
Olive oil	•••
Soya oil	•••
Pectin	•••
Tomato	•••
Yoghurt	••
Sugar	•••

ALKALIS AND SALTS

	Concentration	Permanent contact	Occasional contact
Oxygenated water	10 %	•••	•••
	25 %	•••	•••
Ammonia	25 %	•••	•••
Calcium chloride	Sat. sol.	•••	•••
Sodium chloride	Sat. sol.	•••	•••
Sodium hypochlorite (active chlorine)	0.63 %	••	•••
	13 %	•	••
Caustic soda	50 %	•••	•••
Aluminium sulphate	Sat. sol.	•••	•••
Potassium hydroxide	50 %	•••	•••
Potassium permanganate	5 %	•••	•••
	10 %	••	•••

SOLVENTS

	Permanent contact	Occasional contact
Acetone	••	•••
Ethyl alcohol	•••	•••
Benzol	•••	•••
Chloroform	•	•
Methylene chloride	•	•
Ethylenic glycol	•••	•••
Perchloric ethylene	•	••
Carbon tetrachloride	•••	•••
Tetrahydrofuran	•	•
Toluene	•••	•••
Trichloro-ethylene	•	•
Xylene	•••	•••

FUELS AND OILS

	Permanent contact	Occasional contact
Petrol	•••	•••
Diesel oil	•••	•••
Coal tar oil	••	•••
Mineral oil	•••	•••
Petroleum	•••	•••
Mineral spirit	•••	•••
Turpentine	•••	•••

LEGEND

EN 12808-1

**COMPLIANT
EUROPEAN
REGULATION**

Chemical resistance:

- excellent
- good
- poor

Values taken at:
 - environment + 23 °C / 50% U.R.
 - chemical aggressive agent + 23 °C



THE KERAKOLL GLOBAL SERVICE

Wherever you are, and whatever your project needs are, you can always rely on the Kerakoll Service: highly-efficient, global customer support matching the high quality of our products.

Technical Service +39-0536.811.516 - Technical assistance in real time

Training Service - Professional training to support our quality

Guarantee Service - A long-lasting warranty

Kerakoll.com - The channel of choice for your projects



KERAKOLL QUALITY STANDARD

In all units of the Kerakoll Group, before being considered suitable for production, products undergo stringent testing in accordance with the very high requirements set by the Kerakoll Quality Standard: a process supported by the Centre for Applied Technology which assists the work of researchers with its sophisticated resources and laboratories. At the Kerakoll laboratories the various elements of formulations are carefully analysed to identify and eliminate any factors of weakness by means of simulation of real working conditions in building sites. After the testing cycles, the new products are submitted to the extreme fatigue of the Safety-Test process.



EUROPEAN CONFORMITY REGULATIONS

The Kerakoll testing and quality-control methodology complies with the tests indicated by the new European Regulations, which represent a long-overdue step forward in the standardisation of the current European regulatory system. This new standard of conformity for the field of adhesives and grouts for ceramic tiles and natural stone once again confirms the technological superiority of Kerakoll products.



SAFETY, HEALTH AND THE ENVIRONMENT

For an industrial system such as Kerakoll it is vitally important to ensure that human health and the environment are protected. The Kerakoll company policy is to ensure that every possible safeguard be taken to make sure that these factors are always considered, and regulations and specific methods have been developed over the years for this purpose at all levels of the organisation. The CARE Project is the result of the Group's concern for human health and the environment, and ensures that the Group's products are perfectly safe for use and that the building materials supplied to builders ensure a very high level of safety before, during and after their use.

The information given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind our Company in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.

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KERAKOLL
SUPERIOR BUILDING TECHNOLOGY

T +39-0536.816.511

E info@kerakoll.com

F +39-0536.816.581

W www.kerakoll.com