FASSAFILL EPOXY

DATA SHEET

Two-component acid resistant coloured epoxy adhesive and decorative sealant for joints from 1 to 10 mm

Interior/Exterior

Interior/exterior flooring

In pools

Plastic containers

Notched trowel

Rubber trowel

Advantages

- Acid and alkali resistant
- Impermeable to oils
- High mechanical strength
- High abrasion resistance
- Shrinkage- and crack-free
- Reduced absorption
- Excellent workability
- Extremely easy to clean
- Low volatile organic compound emissions
- High colour yield

Composition

Component A: made from epoxy resins, with special aggregates
Component B: corresponding hardener

Supply

- Special packs with protection against moisture, 3 kg (2.7 kg of Comp. A and 0.3 kg of Comp. B)
- Tints: available in 31 colours (see table of colours)

Use

FASSAFILL EPOXY complies with the requirements of EN 13888 as a reactive grout (class RG) and is used for sealing interior and exterior ceramic floors and wall coverings (including thin and/or large format slabs), vitreous mosaic where a highly aesthetic finish and a high level of hygiene are required, in environments for civil, commercial and industrial use.
FASSAFILL EPOXY is marked as an improved reactive adhesive (class R2) in accordance with EN 12004 and can be used as an adhesive for acid-resistant bonding to interior and exterior ceramic floors and wall coverings, vitreous mosaic, acid-resistant natural stone and floor and wall coverings, in civil, commercial and industrial environments.
Typical application examples are bonding and sealing in bathrooms, showers, swimming pools, saunas and spas, wellness centres, tanks containing seawater, brackish or otherwise aggressive water, radiant floors or environments with intense traffic.
FASSAFILL EPOXY allows you to create environments in compliance with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding hygiene and foodstuffs.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Substrate preparation

Before grouting joints with FASSAFILL EPOXY, check that the covering has been laid in compliance with the application instructions and the regulations in force, and that all of the tiles are firmly bonded to the substrate.
Also make sure that the bedding mortar or adhesive used for bonding the covering is well cured, sufficiently hardened and dry, and that the specified waiting times have been complied with.
The joints and the finish covering (ceramic, etc.) must be cleaned beforehand to remove any adhesive residues, dust and loose parts, which must be carefully vacuumed up; in addition, the joints must be empty and free for at least 2/3 of the thickness of the tiles (or the entire thickness for thin tiles).
If used as an adhesive, the application surface must be cured, intact, dry, stable, mechanically resistant. Any traces of oil, grease, wax, paints, varnishes etc. must be removed beforehand, as well as any crumbling or loose parts. Any cracks or recasting on horizontal surfaces will be structurally sealed using FASSA EPOXY 300 epoxy sealant. For cementitious floor screeds with insufficient surface resistance, assess the need for consolidation with PRO-MST, a specific high-penetration product. Any corrections in height or flatness must be made using suitable products.

Mixing

Add one 0.3 kg pack of FASSAFILL EPOXY Comp. B to each 2.7 kg sack of FASSAFILL EPOXY Comp. A and carefully mix using a helical rotor at low speed until obtaining a uniform and smooth mixture. Make sure that the components are carefully mixed together, moving the mixture from the bottom and sides of the container using a spatula or trowel. Apply the mix using a rubber-coated trowel. Apply diagonally to the direction of the tiles, making sure to completely fill the joints and remove any excess material with the spatula. The paste can be worked for around 45 minutes and can be walked on after about 24 hours at +20°C. Lower temperatures significantly extend the time after which the surface can be walked on. While the product is still fresh, spray warm water and clean with an abrasive felt with a circular motion to remove the grout residues, making sure to emulsify the entire surface in the same way. Pass over the surface again using a cellulose sponge and where necessary FASSAFILL EPOXY CLEANER diluted 1:5 with water. The water used for washing and the equipment must always be kept clean; sponges and felts must be replaced when they are excessively impregnated with product. If the tiles have some stains or sticky spots the day after cleaning, these can be cleaned using a cellulose sponge and a 1:5 solution of FASSAFILL EPOXY CLEANER and water. For more persistent dirt and hardened grout residues, use pure FASSAFILL EPOXY CLEANER within 24 hours of application; after this time the product can only be removed mechanically. Finally, wash with plenty of water and then dry or remove the water with a wet vacuum cleaner.
If applying as an adhesive, mix the two components according to the previous instructions, spread the adhesive with the smooth part of the trowel to ensure maximum adhesion to the substrate, then create ridges with the notched part of the trowel, chosen according to the the type of covering being applied. Then apply the covering within the adhesive's open time, exerting light pressure and tapping the tiles carefully so that the entire surface is in perfect contact with the adhesive and the back of the tile is completely wetted by adhesive (for mosaics, use a rubber trowel). Depending on the characteristics of the tile (weight and size) and the thickness of adhesive applied, to assist application it is recommended to use Fassa Bortolo levelling systems (e.g. NEW LEVEL TILE kit). In accordance with the application standards in force, where required, spread the adhesive on both surfaces being bonded, so as to ensure full contact.
For correct application, please see the technical documents for each individual product described above.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Warnings

- Product for professional use.
- Always consult the safety data sheet before use.
- Do not change the ratio of Comp.A to Comp.B.
- At ambient temperatures below 12°C or above 30°C, leave FASSAFIL EPOXY to acclimatise at 20°C for at least 24 hours.
- Do not use FASSAFILL EPOXY to grout coverings dirtied by adhesive, mortar or dust.
- Do not use FASSAFILL EPOXY when there is water in the joints.
- Do not use FASSAFILL EPOXY to make division or expansion joints. Use FASSASIL NTR PLUS.
- Do not use FASSAFILL EPOXY mixed with GLITTER LUXOR for exteriors or application in swimming pools.
- Do not use FASSAFILL EPOXY where chemical resistance other than or higher than the values specified in the table is required.
- Do not use FASSAFILL EPOXY in environments where it may come into permanent, extended or repeated contact with organic acids, such as lactic acid and acetic acid, or fatty acids, such as oleic acid (oil mills); for uses where higher chemical resistance is required, verify whether to use FE 838.
- Before grouting polished porcelain gres or porous coverings in general, carry out a preliminary test to check cleanability.
- Clean equipment with abundant water or alcohol before FASSAFILL EPOXY starts to dry.
- As FASSAFILL EPOXY is semi-transparent, the colour may be affected by the colour of the application adhesive.
- Extended contact of FASSAFIL EPOXY with certain acids, oxidants, solvents and solutions may change the colour of FASSAFILL EPOXY, without altering its mechanical strength.
- Dispose of contents / container in accordance with national regulations.

FASSAFILL EPOXY it must be used in its original state without the addition of foreign materials.
Warning: FASSAFIL EPOXY cannot be cleaned off once hardened.

Storage

Keep in a dry place, away from sources of heat and direct sunlight, for no longer than 24 months. Once the product has expired, it must be disposed of in accordance with the current legislation.

Quality

FASSAFILL EPOXY is subjected to accurate and constant checks in our laboratories. The raw materials used are rigorously selected and controlled.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Colour range

in-CLASSIC

F01 White
F03 Light grey
F05 Ice
F07 Manhattan
F09 Quartz grey
F11 Grey
F13 Sand
F15 Anthracite
F17 Black

in-WOOD

F19 Pergamon
F21 Jasmine
F23 Beige
F25 Anemone
F27 Light sand
F29 Powder pink
F31 Caramel
F33 Brown
F35 Ruby

in-COLOURS

F37 Amaranth
F39 Terracotta
F41 Dark brown
F43 Magnolia
F45 Aqua green
F47 Green
F49 Lemon
F51 Anise
F53 Crocus
F55 Ultramarine
F57 Blue
F59 Red
F61 Cyclamen

All Fassa Bortolo sealants used to fill joints between ceramic tiles and stone materials meet the requirements of EN 13888.

The colours reproduced are purely indicative and may vary for reasons due to printing, reproduction and conversion of the images.

It should also be noted that colour rendering is affected by several other factors, including, by way of example: natural light, which is not uniform or constant; artificial light, affected by the colour temperature of the light source or CCT - Correlated Colour Temperature; and the colour of adjacent surfaces. The display of colours by computers is also affected by the user's display settings.

For a more meaningful colour match, refer to the grouting samples provided in the colour chart.

In any case, the final colour obtained on site will depend on the processing, application and cleanliness of the sealant and the type and colour of the tiles adjacent to the joints, and may also be subject to changes over time, including for reasons relating to environmental conditions (humidity, light, etc.).

For all of these reasons, Fassa Srl offers no guarantee whatsoever relating to the colour of Fassa Bortolo sealants and the product's correspondence to the images and samples provided, as well as to the final result obtained on site, declining all liability pertaining to this attribute.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Technical Data

Specific weight comp. A thixotropic resin	approx. 1.6 kg/l
Specific weight comp. B amber paste	approx. 1.0 kg/l
Mix ratio	9 parts Comp. A + 1 part Comp. B (pre-dosed packs)
Specific weight of A+B mixture	approx. 1.5 kg/l
Duration of the mix at +20°C	approx. 45 minutes
Application temperature	from +12°C to +30°C
Ready for normal use	after approx. 7 days at + 20°C
Temperature resistance	from -20°C to +100°C
Walkability	after at least 24 hours at 20°C
Total hardening	7 days in normal conditions
Yield as grout	See the table
Yield as adhesive	2-4 kg/m2
Classification according to standard 13888	RG
Classification according to standard EN 12004	R2

Requirements in accordance with EN 13888	
Resistance to abrasion (EN 12808-2)	< 250 mm^3
Flexural strength after dry storage (EN 12808-3)	≥ 30 N/mm^2
Compressive strength after dry storage (EN 12808-3)	≥ 45 N/mm^2
Shrinkage (EN 12808-4)	≤ 1.5 mm
Water absorption after 240 minutes (EN 12808-5)	≤ 1 g

Requirements in accordance with EN 12004	
Initial shear adhesion strength (EN 12003)	≥ 2 N/mm^2
Open time: tensile adhesion strength (EN 1346)	≥ 0.5 N/mm^2 after no less than 20 minutes
Shear adhesion strength after water immersion (EN 12003)	≥ 2 N/mm^2
Shear adhesion strength after thermal shock (EN 12003)	≥ 2 N/mm^2

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Theoretical consumption of FASSAFIL EPOXY g/m² (approx.)

TILE SIZE			D = JOINT WIDTH				
A	B	C	1 mm	3 mm	5 mm	8 mm	10 mm
20	20	4	630	1890	-	-	-
50	50	4	252	756	1260	-	-
50	50	8	504	1512	2520	-	-
75	150	6	32	96	160	256	320
100	100	6	189	567	945	1512	1890
100	100	8	252	756	1260	2016	2520
100	100	10	315	945	1575	2520	3150
100	200	6	142	426	710	1136	1420
100	200	10	236	708	1180	1888	2360
120	240	12	236	708	1180	1888	1360
150	150	6	126	378	630	1008	1260
150	150	10	210	630	1050	1680	2100
200	200	8	126	378	630	1008	1260
250	250	12	151	453	755	1208	1510
250	250	20	252	756	1260	2016	2520
250	330	8	89	267	445	712	890
300	300	8	84	252	420	672	840
300	300	10	105	315	525	840	1050
300	300	20	210	630	1050	1680	2100
300	600	10	79	237	395	632	790
330	330	10	95	285	475	760	950
400	400	10	79	237	395	632	790
450	450	12	84	252	420	672	840
500	500	12	76	228	380	608	760
600	600	12	63	189	315	504	630

(A+B)/(AxB) x C x D x 1500 x 1.05 = g/m²	A = tile length (in mm)
	B = tile width (in mm)
	C = tile thickness (in mm)
	D = joint width (in mm)

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Table of resistance to chemical aggression of FASSAFILL EPOXY EN12808-1 at (23±2)°C and (50±5)% RH

Contact liquid	Permanent contact	Temporary contact
HCl 37%	**	***
H_2SO_4 50%	***	***
HNO_3 25%	**	**
HNO_3 50%	*	*
H_3PO_4 50%	**	***
H_3PO_4 75%	*	**
Acetic acid 2.5%	*	**
Acetic acid 5%	*	**
Acetic acid 10%	*	*
Formic acid 2.5%	*	*
Formic acid 5%	*	*
Formic acid 10%	*	*
Lactic acid 2.5%	***	***
Lactic acid 5%	*	**
Lactic acid 10%	*	*
Peracetic acid 1%	**	***
Peracetic acid 5%	*	*
Oleic acid	*	*
Citric acid 10%	***	***
Tannic acid 10%	**	***
Tartaric acid 10%	***	***
Oxalic acid 10%	**	**
NaOH 50%	***	***
KOH 50%	***	***
NH_3 25%	**	***
Na_2SO_4 10%	***	***
NaCl 10%	***	***
NaCl saturated solution	***	***
$CaCl_2$ saturated solution	***	***
$Na_2S_2O_3$ saturated solution	***	***
NaClO 1.5%	***	***
NaClO 5%	**	***
$KMnO_4$ 5%	*	**
$KMnO_4$ 10%	*	**
Hydrogen peroxide 10%	**	***
Hydrogen peroxide 25%	**	***
Glycerine	***	***
Ethylene glycol	***	***
Ethanol	*	**
Poor resistance * Good resistance ** Excellent resistance ***		

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com

Contact liquid	Permanent contact	Temporary contact
2 propanol	***	***
Acetone	*	*
Ethyl acetate	*	*
Methylene chloride	*	*
Trichloromethane	*	*
Trichlorethylene	*	*
Carbon sulphide	*	*
Benzene	*	*
Methylbenzene	*	*
Dimethylbenzene	*	*
Oxolane	*	*
Petrol	**	***
Diesel	***	***
Turpentine	***	***
White spirit	***	***
Nitro solvent	*	*
Olive oil	***	***
Poor resistance * Good resistance ** Excellent resistance ***		

The above information refers to laboratory testing; it is possible that in practical applications on site these may differ considerably according to the conditions in which the material is applied. In any case the user must check that the product is suitable for the intended application, taking all responsibility for its use. Fassa reserves the right to make technical modifications without notice.

Technical specifications regarding the use of Fassa Bortolo products for structural or fire prevention applications will only be officially valid if provided by Fassa Bortolo's "Technical Service" and "Research, Development and Quality System". If necessary, contact Technical Service in your country of reference (IT: area.tecnica@fassabortolo.com, ES: asistencia.tecnica@fassabortolo.com, PT: assistencia.tecnica@fassabortolo.com, FR: bureau.technique@fassabortolo.fr, UK: technical.assistance@fassabortolo.com).

Please note that for the aforementioned products, the assessment is required by the appointed professional, in accordance with regulations in force.

Fassa S.r.l. - Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy - www.fassabortolo.com