



ATLAS EPO-S

universal epoxy binder

- shrinkage-free waterproof repair mortar
- for repairing cracks and fissures in floor screeds
- used together with quartz sand to make bonding layers under screeds and self-levelling compounds
- used together with quartz sand to make bonding layers on critical substrates under ceramic tiles of any size
- binder for making levelling and joint compounds



Properties

ATLAS EPO-S consists of two components (A and B) to be mixed together immediately before application. Component A is an epoxy resin, component B is a hardener.

Shrinkage-free bonding ensures tight filling of cracks and fissures in screeds.

Water tightness - can be used on substrates exposed to water and permanent moisture.

High strength and chemical resistance - can be used on surfaces exposed to mechanical damage and heavy vehicle traffic. In combination with quartz sand with a grain size of 0.5 - 1.2 mm, mortars with a strength of up to 65 MPa can be obtained.

Very high adhesion to concrete, cement and anhydrite screeds, terrazzo, epoxy resins and metals.

Intended use

ATLAS EPO-S binder in combination with fractionated quartz aggregate ensures the possibility of obtaining epoxy mortars with **very high strength parameters** - for filling cavities, cracks and fissures in heavily loaded substrates and industrial floors.

Gluing and filling cracks in floor screeds.

Fixing steel and plastic elements in concrete and reinforced concrete substrates, in masonry walls, etc.

Used together with quartz sand to make bonding layers and strengthen mineral substrates under screeds, self-levelling compounds and ceramic tiles.

Embedding pipe passages, skimmers and components of swimming pool equipment.

Coving floor and wall joints before insulation coatings are applied.



Technical data

Mixing ratio: - components A:B by weight - components A:B by volume	0.69 kg : 0.31 kg 2:1
Application temperature	from +15 °C to +25 °C (should be 3°C above the dew point temperature)
Binder density after mixing components A and B at +25 °C	1.10 g/cm ³ +/- 5%
Binder viscosity after mixing the components at +25 °C (Ford viscosity cup Ø 6 mm)	120 s +/- 5%
Pot life after mixing the components*	approx. 20 minutes
Gel time*	approx. 90 minutes
Time to application of the next layer*	after approx. 16 hours (not earlier than after the first layer has bonded)
Foot traffic after approx. 16 hours	
Compression strength	at least 50 MPa
Bending strength	at least 15 MPa
Adhesion to concrete	approx. 3 MPa
Mechanical loading	after approx. 3 days
Compression strength after adding quartz sand	from 60 to 65 MPa **
Bending strength after adding quartz sand	from 15 to 20 MPa **
Temperature resistance after binder has bonded	from -20 °C to +70 °C

*) - for T=20°C, relative humidity 60 %

**- strength depends on the quartz sand fraction

Technical requirements

ATLAS EPO-S Declaration of Performance (DoP) no. 263/CPR EN 13813:2003 (PN-EN 13813:2003)	
Intended use: for interior use, subject to reaction to fire regulations.	
Reaction to fire (in case of exposure)	B _{f1} -s1
Abrasion resistance (for substrates subject to abrasion)	≤ AR1
Adhesion	≥ B1.5
Impact resistance (for substrates subject to abrasion)	≥ IR4

Method of application

Substrate preparation

The substrate must be:

with sufficient bearing capacity,

dry - humidity not higher than 4%,

clean - degreased, dust-free, free of substances that reduce adhesion.

The substrate can be concrete, reinforced concrete, cement or anhydrite screed. Roughen smooth, polished and low adhesion substrates by sandblasting, milling or shot blasting etc. Remove bituminous coatings. Any remaining cement screed laitance (bleed water) and anhydrite screed laitance must be removed.

Binder preparation

Mix component A in the delivery container to homogenize it. Then add the total amount of component B and mix both components with a mechanical mixer at a speed of max. 300 rpm. Mixing time approx. 3 minutes. While mixing, collect the mortar from the walls and bottom of the container with a mixer in order to thoroughly mix the hardener (component B). After mixing, pour the material into the working container and mix again.

Filling cracks in floor screeds

Cracks less than 0.5 mm wide must be enlarged by cutting. Clean the cracks thoroughly and remove dust from them. ATLAS EPO-S binder can be poured directly into cracks prepared in this way. 10% of xylene by weight can be added to the resin (component A). This will reduce the resin viscosity and facilitate penetration of the binder into the screed structure. Larger cracks - over 0.5 mm - can be filled with a binder mixed with dry quartz sand. The maximum fraction of sand must not be greater than half the width of the cracks to be filled. The mixing ratio by weight of the binder and sand should be determined experimentally, as a rule it is a ratio from 1: 1 to 1: 5 (binder: sand). In order to increase crack stabilization, make perpendicular cuts in the screed every 0.15 - 0.3 m for a length of approx. 10 cm. The width of the cuts should be at least 5 mm, and the depth should be at least 10 mm. Clean the cuts of dust and fill halfway with epoxy mortar (binder + quartz sand). Place steel fasteners (plates or carpentry nails) in the cuts.



The reinforced cuts can be filled completely. Pour the binder or a mixture of binder and quartz sand into the cracks directly from the working container and scrape repeatedly with a steel spatula until the cracks are completely filled. Repeat the action until the desired effect is achieved. After filling the cracks, cover the surface with plenty of dry quartz sand. After the binder has hardened, after approx. 24 hours, remove the excess sand and proceed to further works.

Filling cavities in screeds and floors, coving

Add dry quartz sand of 0.2-0.8 mm fraction to the mixed components A and B. In order to obtain liquid mortar, add quartz sand to the ready binder in a weight ratio of 1: 4 to 1: 6 (binder: sand). In order to obtain moist mortar, add quartz sand to the ready binder in a weight ratio of 1: 6 to 1: 10 (binder: sand). The ratio depends on the sand fraction and should be determined individually each time, depending on the needs. Apply the mortar with a spatula or a smooth steel trowel. To increase the adhesion of next finishing layers, sprinkle the fresh mortar generously with quartz sand. After the mortar has hardened, remove the excess sand.

Making bonding layers on critical substrates under screeds, self-levelling compounds and floor cladding made of ceramic tiles (including large-format tiles).

Pour ATLAS EPO-S binder on the primed surface and spread with a rubber scraper, steel squeegee or roller to create a thin layer. Spread the primer in such a way as not to form puddles and pools in the substrate irregularities. Sprinkle the fresh binder layer generously with quartz sand as needed, e.g. using quartz sand with a grain size of 0.2 to 0.8 mm. The sprinkled surface should be 100% covered with sand, with no visible wet spots. After the binder has hardened, remove the excess sand.

Consumption

Consumption depends on the type of substrate and the function of the binder. The consumption for substrate priming is 0.3-0.5 kg/m².

Packaging

1 kg set:

component A - metal can - 0.69 kg

component B - metal can - 0.31 kg

Safety information

Component A

Contains 2,2-bis [4- (2,3-epoxypropoxy) phenyl] propane. Irritating to skin. May cause an allergic skin reaction. Irritating to eyes. Toxic to aquatic life with long lasting effects. If medical advice is needed, have product container or label at hand. Keep out of the reach of children. Wash hands and body parts in contact with the product thoroughly after use. Wear protective gloves/protective clothing/eye protection/face protection. Collect the spill. Dispose the contents / container to an authorized waste disposal point or according to the manufacturer's instructions. Follow the instructions in the Material Safety Data Sheet.

Component B

Contains benzyl alcohol, formaldehyde, polymer with benzamine, hydrogenated 4,4'-methylenebis (cyclohexylamine) 2,4,6-tris (dimethylaminomethyl) phenol. Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects. If medical advice is needed, have product container or label at hand. Keep out of the reach of children. Do not inhale vapours. Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do not induce vomiting. If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a poison centre or doctor immediately. Dispose the contents and container to an authorized waste disposal point or according to the manufacturer's instructions.

Maximum content of VOC in the product: below 499 g/l after mixing component A and B. VOC content limit: 500 g/l Category A/10J/FR.

Storage and transport

Component A and B. Avoid release to the environment. Transport and store in tightly sealed packaging in dry and well ventilated places designed for this purpose, at temperatures above 10 °C.

The shelf life is 24 months from the date of production indicated on the packaging.



Important additional information

The product has a natural tendency to crystallize. This process can occur during storage and is not a symptom of a material defect. Such crystallized resin can be liquefied again by heating it to about 40°C, without any consequences affecting the declared quality.

Clean the tools immediately after work with an organic solvent, e.g. acetone.

The information included in the Product Data Sheet constitutes basic guidelines concerning the use of the product and does not release from the obligation to conduct work according to the best construction practices and health and safety at work regulations. On the date of issue of this Product Data Sheet, all previous Product Data Sheets become invalid. The accompanying documents for the product are available at www.atlas.com.pl.

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