

EPIDIAN® FLOOR C1

TWO-COMPONENT THIN EPOXY FLOORING

The **EPIDIAN® FLOOR C1** flooring system is designed to make thin (0.15-0.5mm), aesthetic and easy to maintain, coloured floors on a concrete substrate, in order to protect them against dust, as well as mechanical and chemical impact. provides, among others, resistance to water, alkali, petrol, diesel oil, or light loads from vehicles with tyres.

APPLICATION

- bays and aisles in industrial plants
- garages and bus depots
- technical rooms in offices and schools
- warehouses, dairies, breweries, food processing plants
- staff facilities
- sterile rooms in pharmaceutical plants

PROPERTIES

- the highest class of resistance to abrasion (BCA AR 0.5)
- high chemical resistance
- good mechanical resistance
- water resistance
- possible application on walls or other vertical surfaces
- possible application in spray technology on horizontal surfaces
- does not contain nonylphenol

APPROVALS/STANDARDS

1. Flooring material inside public utility buildings and industrial constructions, as well as for the food processing industry in accordance with PN-EN 13813:2003.
2. Performance declaration No. C1/2/04/2017.
3. Construction material: CE mark.
4. Fire classification in accordance with PN-EN 13501-1+A1:2010. Classification report 01321.1/16/Z00NZP.

PACKAGING

EPIDIAN® FLOOR G1: 5 kg, 20 kg, 50 kg, 200 kg.

HARDENER U1: 1 kg, 5 kg, 40 kg, 180 kg.

EPIDIAN® FLOOR C1: 5 kg, 20 kg, 50 kg, 200 kg.

FEATURES AND COLOURS

EPIDIAN® FLOOR G1 – colourless liquid

HARDENER U1 – colourless liquid

EPIDIAN® FLOOR C1 – pigmented liquid

RAL colouring. Basic colours: 1001; 1013; 1015; 6001; 6011; 6021; 7001; 7032; 7035; 5024.

Other colours are available on request. Some slight discolouration of the coating due to sunlight is acceptable, as it does not change the parameters of the flooring.

SHELF LIFE

12 months from the date of manufacture

STORAGE

EPIDIAN® FLOOR C1 should be stored in the original, airtight packaging, in a dry and well-ventilated storage room. Keep away from direct sunlight, heat sources and fire.

TECHNICAL INFORMATION

Density at 20°C PN-EN ISO 2811-1:2002

EPIDIAN® FLOOR G1 1.05-1.15 g/cm³

EPIDIAN® FLOOR C1 1.35-1.65 g/cm³

U1 HARDENER 0.96-1.06 g/cm³

- Surface hardness SH 50
- Resistance to abrasion BCA AR 0.5
- Adhesion B 2.0
- Impact resistance IR 9
- Reaction to fire Bfl-s1
- Shore D hardness > 80
- Release of corrosive substances SR

CHEMICAL RESISTANCE

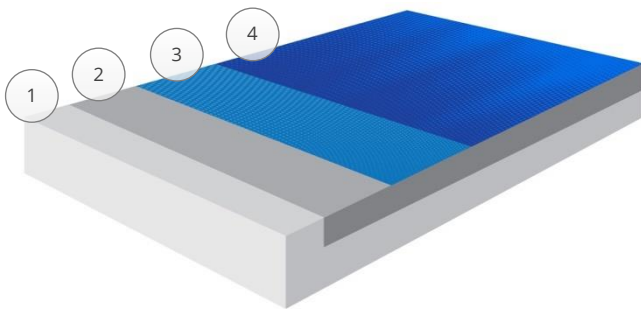
The composition is resistant to many chemical substances. For more information, please contact representatives of CIECH Sarzyna S.A.

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INFORMATION ABOUT ADDITIONAL SYSTEMS

- EPIDIAN® FLOOR C1 Plus thin epoxy flooring with quartz sand
- EPIDIAN® FLOOR C1 Flakes thin decorative epoxy flooring system with acrylic flakes

STRUCTURE OF THE EPIDIAN® FLOOR C1 SYSTEM



1. concrete substrate
2. primer
EPIDIAN® FLOOR G1 + U1 hardener
3. main coat (first layer)
EPIDIAN® FLOOR C1 + U1 Hardener
4. main coat (second layer)
EPIDIAN® FLOOR C1 + U1 Hardener

MIXING PROPORTIONS

Priming solution:

- EPIDIAN® FLOOR G1 100 parts by weight
- U1 HARDENER 40 parts by weight

Colour composition:

- EPIDIAN® FLOOR C1 100 parts by weight
- UTWARDZACZ U1 25 parts by weight

DURABILITY

- EPIDIAN® FLOOR G1 priming solution with U1 Hardener: Durability depends on the absorbency of the substrate and equals approx. 0.2 – 0.4 kg/m²;
- EPIDIAN® FLOOR C1 flooring mass with U1 Hardener: Durability depends on the structure of the substrate and, on average, a single application of it,

with a layer thickness of 0.15-0.25 mm which is 0.2-0.3 kg/m².

- Recommended to apply two layers.

INSTRUCTIONS FOR APPLICATION

Substrate parameters:

- minimum compressive strength – 25 MPa;
- minimum tensile strength – 1.5 MPa;
- fresh concrete should be seasoned for at least 28 days;
- permissible moisture content 4%.

Preparation of the substrate:

The surface of the substrate must be clean, dry and absorbent, that is, fairly rough. Impurities, such as hardened plaster, cement lotion and remains of paint, along with substances with an anti-adhesive effect, like oils, fats, paraffin and lubricants, should be carefully removed.

Various methods for cleaning surfaces are used, including shot blasting, sandblasting and firing, etc. After cleaning, the substrate should be thoroughly vacuumed, preferably with an industrial vacuum cleaner. Any holes and unevenness in the substrate should be primed and filled with epoxy putty and then levelled, in order to maintain a certain degree of roughness, thus increasing the adhesion of the coat being applied.

Conditions for application:

The air temperature and humidity during preparation, along with the application and curing of the epoxy compositions, have a big impact on the quality and properties of the coating.

Optimal working conditions are:

- temperature approximately 20°C but no lower than 15°C;
- relative air humidity 65%.

At higher humidity levels, turbidity, cratering or stickiness may appear on the cured coating. Lowering of the temperature of the substrate, during curing below the dew point, has a particularly critical effect on the appearance and quality of the coating.

Dew point:

Condensation, formed at the dew point temperature, significantly reduces adhesiveness. In case of multi-layer

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coatings, the next layer can never be applied if the temperature of the substrate is lower than, or equal to, the dew point temperature. The temperature must be higher by at least 3°C. Before starting flooring work, the temperature of the substrate, as well as the ambient temperature and relative air humidity should be taken. If the ratio of the substrate temperature to the ambient temperature is unfavourable, hot air blowers, heaters, etc., should be used. During the curing of subsequent coatings, the workplace should be protected against flooding with water or other chemicals, as well as against dust and draughts.

Substrate priming:

Before use the components of the composition should be mixed in accordance with the abovementioned weight proportions:

EPIDIAN® FLOOR G1	100 parts by weight
U1 HARDENER	40 parts by weight

A portion of the mixture, not exceeding 3 kg, should be prepared at once and used within no longer than 10 minutes. The priming solution should be applied with a brush, a roller or with a rubber squeegee. Priming should be done in such a way that leaves no clumps of the prime on the surface of the substrate – the solution should be completely absorbed by the concrete. Substrates with low absorbency level should be primed once, whereas substrates with higher absorbency potential should be primed twice. The second layer can be applied only after the first layer has fully hardened. The primed substrate should be left for 16-24 hours at 20°C.

Application of the base layer:

The individual components of the flooring composition should be thoroughly mixed in weight proportions:

EPIDIAN® FLOOR C1	100 parts by weight
U1 Hardener	25 parts by weight

At any one time, a single portion of the composition, consisting of no more than 6 kg, should be prepared and used within 15 minutes. Mixing should be done in the following manner:

- mix component A thoroughly; this is necessary due to the partial sedimentation of the fillers;
- add component B and mix with a low-speed mixer until a homogeneous mass is obtained.

Drills can be used at a **maximum speed of 400 rpm**. Streaks indicate that the mass has been insufficiently mixed. It is also

necessary to pay attention that part of it does not adhere to the walls or to the bottom of the vessel. The mixing time should be kept as short as possible, approximately 3-5 minutes, since too long a mixing causes the mass to overaerate. After mixing, the mixture should be poured into another vessel, preferably one made of polyethylene. The mixture should be stirred again and then applied onto the primed concrete, using a roller or a paint brush. After application, the flooring should be left to cure for 24 hours at a temperature of 20°C. After this time and after making sure that the resin has hardened, the surface should be made lightly matt with fine abrasive paper, in order to remove surface contamination; it should then be thoroughly vacuumed. The second layer should be applied in the same way as the first layer was applied. Allow for the surface to harden.

The floor can be used by pedestrians after a minimum of 24 hours after the last coat had been applied if the entire surface is evenly hardened. The surface can be used for full loads after 7 days and may be washed for the first time after 14 days.

TOOL CLEANING

All equipment used to make epoxy coatings should be cleaned on a regular basis with an acetone type solvent, in order to prevent residues of the epoxy composition from hardening on the tools.

All impurities should be removed immediately to avoid curing.

HEALTH AND SAFETY INFORMATION

Information on the safe handling of epoxy compositions is available in "**Instructions for the use of epoxy resins**".

The data and suggestions contained in this material are based on our own research and considered by us to be reliable. However, we cannot accept any liability for actions and losses resulting directly or indirectly from the use of the products. The user should check the quality, safety and features of the product before applying it. ATTENTION: This information does not replace the Safety Data Sheet or the Technical Sheet which are master documents available upon request.