



Technical Data Sheet

GEPOTECH-11/22

Art.-No. 5 55210

Highly stable sprayable waterproof coating

Properties:

GEPOTECH-11/22 is a high quality, two component reaction resin based on polyurea.

- solvent free
- 100% solids
- extremely rapid setting
- relatively insensitive to moisture
- high impact and abrasion resistance
- crack-bridging
- protects against corrosion
- impermeable to liquids
- resistant to a variety of chemicals, solvents, acids and alkalis
- resistant to weathering
- tolerates radiated heat
- exceptional bond to concrete, steel, GRP, wood etc.

Areas of application:

GEPOTECH-11/22 is used primarily in exterior locations on steel reinforced concrete and steel surfaces such as e.g.

- Sewage shafts, sewage pits
- Sewage treatment works, septic tanks
- Water management, reservoirs
- Pipelines

Technical Data:

Basis:	Isocyanate (A), Amine (B)
Solids content:	100%
Colour:	yellowish
Viscosity (Isocyanate) at 23°C:	1500 +/- 20 mPas (Brookfield) ²⁾
Viscosity (Amine) at 23°C:	1500 +/- 20 mPas (Brookfield) ²⁾
Density (Isocyanate) at 23°C:	1.10 g/cm ³
Density (Amine) at 23°C:	1.02 g/cm ³
Mixed density at 23°C:	1.10 g/cm ³

Shore hardness (D) (24 hrs/23°C/50% RH):	56
Abrasion resistance (Darmstadt pipe tilting jig):	0.03 mm (250,000 load cycles)
Tensile strength:	32.2 N/mm ²
Tear resistance:	126 N/mm ²
Elongation at break:	340%
Mixing ratio:	1:1 by volume
Application temperature (Amin/Iso):	70 – 85°C (Tank and pipe batches the same respectively):
Application pressure:	150 – 180 bar
Gel time:	2-3 seconds
Tack free:	6-7 seconds
Final cure at +23°C:	2 days
Recommended film thickness:	1-3 mm

Packaging:

1 x 220 kg Iso-A component
1 x 200 kg Amine-B component
Components A and B are supplied at a predetermined mixing ratio.

Shelf Life:

6 months in the original unopened packaging (on pallets) when stored dry at a room temperature of +15°C to +25°C.

Substrate:

Concrete, PCC mortar, render, brickwork (joints) substrates must be load-bearing, clean, dry or damp and free from materials that will impair adhesion. Unstable surfaces, or poorly bonded layers e.g. oils, greases, release agents or surface finishes and paint residues must be completely removed.

Notes on the topic:

Residual moisture in cement-based substrates: dry or

GEPOTECH-11/22

damp (in accordance with Def. Rili StB) *

- "Guidelines for the protection and restoration of concrete sections" part 2, clause 1.2.5 "concrete moisture".

"Dry"

After chopping out a fresh piece, about 2 cm deep, it may not visually lighten due to drying out. (In the case of doubt, the concrete is deemed dry if it exhibits an equilibrium moisture content in a climate of 23/50 i.e. dependent on the concrete quality, other absolute values are deemed "dry").

"Damp"

The surface has a matt-damp appearance but may not have a shiny water film. The pore system of the concrete substrate must not be saturated i.e. water dropped onto it must be absorbed and after a short time the surface must look matt again.

Dependent on the condition of the substrate to be treated, suitable means of preparation are to be employed such as e.g. high pressure washing, scabbling, shot blasting, planing.

Dependent on the particular substrate the following additional minimum requirements for cement-based surfaces must be fulfilled:

Concrete quality:	min. C 20/25
PCC mortar:	in accordance with DIN EN 1504-3
Tensile adhesion strength:	mean value: 1.5 N/mm ² lowest value: 1.0 N/mm ²
Render:	PIII
Tensile adhesion strength:	mean value: 0.8 N/mm ² lowest value: 0.5 N/mm ²
Masonry work:	
Tensile adhesion strength:	mean value: 0.5 N/mm ² lowest value: 0.3 N/mm ²

Important advice:

Oil contaminated substrates pose a particular problem; we recommend contacting our Technical Services Department.

The substrates mentioned above are to be properly prepared with GEPOTECH-EP-11/22 before the application of GEPOTECH-11/22. (See technical data sheet).

Product installation:

A pre-requisite for handling GEPOTECH-11/22 is the provision of professional equipment that ensures continuous pressure, temperature, electrical connection and working conditions.

The applicator must be qualified to use high performance polymer-based spray applied coatings. The application handbook for shaft restoration in accordance with DIBt-certification No. 42-2.422 and the installation procedures form the basis for a successful installation of the coating.

General advice:

The temperature of both material components A (isocyanate) and B (polyamine) should be brought to approx. 20-25°C before application. Keep to a surface temperature of approx. +5°C to +30°C, a relative humidity of max. 80-85%, and be aware of the dew point. Especially in higher temperatures and/or higher humidity the substrate temperature should be a minimum of +3°C above the dew point during the coating process.

GEPOTECH-11/22 can be applied in one or several operations to achieve the desired film thickness. The product is to be applied one coat at right angles to the other including on vertical surfaces or overhead areas. Consider: When spraying there will be atomised spray.

Mixing instructions:

GEPOTECH-11/22 may never be diluted. Two component products must always be mechanically

GEPOTECH-11/22

mixed. In particular the pigmented polyamine (B) component is to be vigorously mixed until a homogenous single coloured material is produced. Use a drum mixer.

Ensure that no air is mixed into the material, allow for drying protection as necessary. The isocyanate (A) component requires little or no effort to mix and must be protected from humidity. If the material is left standing in the drum for long periods, the components must be re-stirred.

Working equipment:

To apply GEPOTECH-11/22 heatable, two component high pressure spray equipment is required.

We recommend: DuoMix 2K-apparatus from IMT.

Both components are to be brought to an operating temperature of 75-85°C over separate heating elements, in order to achieve the optimum viscosity. The tempered material is transported via a heated pipe feeder. During the application the temperature is kept constant.

The two components are mixed together in the mixing head of the spray gun and must be carried out at a pressure of 150-180 bar. Tools must be cleaned immediately with an organic solvent. Cured residues can only be mechanically removed.

Advice:

- Only open the drums when commencing the installation work and protect both components from damp with appropriate means such as desiccant or nitrogen.
- Do not spray onto wet surfaces.
- Keep the drums at the specified temperature and pre-warm as necessary.
- GEPOTECH-11/22 changes colour or darkens on exposure to UV rays.
- GEPOTECH-11/22 is only to be used by trained professionals.
- Wear eye protection and protective clothing during application.

- Before starting work, read all product information, application instructions, technical data sheets and Health & Safety data sheets.
- Applications that are not clearly explained in this technical data sheet may only be carried out after consultation with and written confirmation from the Technical Services Department of SCHOMBURG ICS GmbH.
- All publications may be expanded or changed by the manufacturer without advance notice.