

# GEPOTECH®-11/30

## VERY HEAVY-DUTY SPRAY COATING AND WATERPROOFING MEMBRANE

### Product Description:

GEPOTECH®-11/30 is a high quality, two-component reaction resin based on polyurea.

- Solvent free.
- 100% solids.
- Extremely rapid hardening.
- High impact and abrasion strength.
- Heavy-duty traffic coating.
- Waterproofing.
- Highly elastic and crack bridging.
- Protects against corrosion.
- Impermeable to liquids.
- Not sensitive to relative humidity.
- High chemical resistance.
- Resistant to weathering, UV-stable.
- Withstands high levels of radiated heat (temporarily up to +200°C)
- Exceptional adhesion to concrete, steel, GRP, wood etc.

### Areas of Application:

GEPOTECH®-11/30 is mainly used in exterior and interior areas on reinforced concrete and steel surfaces such as e.g.:

- Car Park Decks.
- Process containers in the chemical industry.
- Power stations (abrasion protection, corrosion protection).
- Storage tanks.
- Water management, reservoirs.
- Pipelines.

- Sewerage works, digestion tanks.
- Liquid manure, slurry and silage plants.
- As a sprayable waterproof membrane beneath cement-based screeds or resin bonded screeds.
- As a sprayable waterproof membrane beneath vibration fixed flooring.

### Technical Properties:

Basis	: Polyurea
Solids content	: 100%
Standard Colour	: grey
Viscosity (isocyanate) at +23°C	: 1875 +/- 50 mPas
Viscosity (Amine) at 23°C	: 462 +/- 20 mPas
Density (isocyanate) at +23°C	: 1.12 g/cm <sup>3</sup>
Density (Amine) at +23°C	: 1.00 g/cm <sup>3</sup>
Mixed density at 23°C	: 1.10 g/cm <sup>3</sup>
Shore-hardness (D) (24 hours/+ 23°C/50% RH)	: 51
Tensile strength	: 25.0 N/mm <sup>2</sup>
Elongation at break	: 355%
Impact resistance (Class III, ISO 6272)	: 1:1 Volume
Application temperature (Amine/Iso)	: 75-85°C (Tank and cable hose assembly the same in each case)
Application pressure	: 160-180 bar
Gel time	: 2-4 seconds
Tack free	: 6-7 seconds



Final hardness  
At +23°C : after 2 days  
Recommended film  
thickness : min. 1.5 mm

### Packaging:

45 kg unit:  
1 x 21 kg Amine part A, 1x24 kg ISO Part B

400kg unit:  
1x190 kg Amine Part A (Drum color: white),  
1x210 kg Iso Part B (Drum color: red).

Part A and B are supplied at a pre-determined mixing ratio. Before filling the heated spray equipment containers, thoroughly mix the pigmented polyamine (A) component until a homogenous even color is achieved. Use a appropriate drum stirrer.

### Storage:

12 months in the original unopened containers (on pallets) when stored dry and at a room temperature from +15°C to +35°C.

### Substrate Preparation:

Concrete, PCC mortars, clinker masonry work, GRP panels, carbon steel, V2A and V4A steel. The substrate must be load-bearing, clean, dry or damp and free from substances that can impair adhesion. Unstable surfaces or weak layers e.g., oils, greases, separating agents or residues of coverings or paints are to be completely removed.

#### Note:

Residual moisture of cementitious substrates: dry or damp (to Def. Rili SIB) \*

"Guidelines for the protection and renovation of concrete sections" part 2, section 1.2.5 "Concrete moisture".

#### "dry":

An approximately 2 cm deep freshly produced cut out area may not, as a result of drying, become visibly lighter. (Where doubt exists, this concrete is considered dry when it exhibits equilibrium moisture content for the climate 23/50 i.e., dependent on the concrete classification other absolute values serves for "dry").

#### "damp":

The surface appears matt damp but may not have a shiny film of water. The pore system within the concrete substrate may not be saturated i.e., applied water droplets must be absorbed and the surface must appear matt once again after a short while.

Dependent on the condition of the substrate to be treated suitable preparation methods should be used such as e.g., scabbling, shot blasting, planning, high pressure washing etc.

The following minimum requirements are to be fulfilled dependent on the particular substrate:

Concrete quality	: min C20/25
PCC mortar	: confirming to DIN EN 1504-3
Tensile adhesion strength	: mean value 1.5 N/mm <sup>2</sup> Lowest value 1.0 N/mm <sup>2</sup>
Masonry work	:
Tensile adhesion strength	: mean value 0.5 N/mm <sup>2</sup> Lowest value 0.3 N/mm <sup>2</sup>
Steel/Stainless steel	: no designation

### Important Advice:

Oil-contaminated substrates are particularly problematic. We recommended that you contact



Our Technical Services Department.

The above-mentioned substrates are to prime with the following products before the application of GEPOTECH-11/30:

With concrete/PCC mortars, masonry work:  
INDUFLOOR-IB 1248, INDUFLOOR-IB 1270,  
INDUFLOOR-IB 1250 or INDUFLOOR-IB 1255

With steel/stainless steel (V2A, V4A):  
Primer-2000

### Product Application:

Requirements for handling GEPOTECH®-11/30-professional grade equipment that ensures continuous spray pressure, temperature, electrical connection and working conditions. The user should be already be qualified in the handling of high-performance polymers and spray coatings. The implemented protocols are the basis of successful coating procedures.

### General Advice:

Always take into consideration the surfaces temperature of approx. +5°C to +35°C, the relative humidity of max. 80-85% and dew point. The substrate temperature during coating and curing should be at least 3°C above the dew point temperature especially during high temperatures and/ or high humidity.

GEPOTECH®-11/30 can be applied in one or multiple layers in order to achieve the desired film thickness. Application is in a crisscross manner even on vertical surfaces or in overhead areas. Do not exceed a waiting time of 2 hours between coats.

Caution: When spraying there will be an atomized spray. Take appropriate precautionary measures.

### Mixing Instruction:

GEPOTECH-11/30 may never be diluted. The two parts must always be mechanically stirred before decanting. In particular mix the pigmented polyamine part A thoroughly until a single color exists. Use a drum mixer. Ensure that no air is entrained into the material. The isocyanate part B only requires brief mixing but must be protected from humidity with drying as necessary. Where the drums have stood for a long time, the components must be re-stirred.

### Work Tools:

Two component high pressure spray equipment which can be heated is required for application. Both parts are drawn over separate heating elements to a temperature of approx. +75 - +85°C in order to achieve the optimum viscosity. The tempered material is transported via a heat able cable hose assembly. During application the stability of the temperature is to be checked. Blending of both material parts takes place in the mixing head of the spray gun and must be carried out at a pressure of up to 160-180 bar. Work tools must be cleaned immediately after use with an organic solvent. Reacted residues can only be mechanically removed.

### Important Advice:

- Only open the drums when work is about to start and protect with appropriate appliances such as desiccants or Nitrogen.
- Do not spray onto wet surfaces.
- Keep drums at the appropriate temperature and pre-warm as necessary.
- GEPOTECH®-11/30 will change in color or darken on exposure to UV light. To prevent the coating against discoloration, its recommended to apply the sealer INDUFLOOR-IB 2325 onto the finished and hardened coating, after priming with INDU-Primer-2000.



- GEPOTECH®-11/30 is only designed for use by trained professionals.
- Wear protective glasses and clothing during work.
- Before starting work read all product information, work instructions, technical data sheets and Health & Safety data sheets.
- Applications that are not clearly mentioned in this Technical Data Sheet may only be carried out after consultation with and written confirmation from the technical services department of AQUAFIN Pakistan.
- Publications may be expanded or changes without advance notice from the manufacturer.

Take note of the annex:  
Chemical resistance list, dew point table.



### Chemical Resistance List:

Raw material	TG	Low (<8 hrs.)	Medium (<72 hrs.)	High (<14 days)
Petrol	1		•	
Motor fuel: super and normal to DIN EN 228: 2004-03 with max. 20% by volume of bio alcohol	1a	•		
Diesel fuel to DIN EN 590:2004-03 with max. 20% by volume of bio diesel	3b			•
All hydrocarbons except benzene, unused machine and lubricating oil, aviation fuel, heating oil, diesel	4			•
Benzine	4a	•		
Alcohols with max. 48% methanol, glycol ether	5	•		
All alcohols and glycol ether	5a	•		
Ester and ketones	7			
Aqueous solutions of aliphatic aldehydes up to 40%	8			•
Aliphatic aldehydes incl. PG8	8a	•		
Aqueous solutions of organic acids (carbonic acid) 10% or its related salts (in aqueous solution)	9			•
Aqueous solutions or organic acids, carbonic acids (except formic acid) or their related salts (in aqueous solution)	9a	•		
Mineral acids up to 20%	10		•	
Inorganic salts	11			•
Amines and aqueous solutions of their sats	13		•	
Aqueous solutions or organic surfactants	14			•
Cyclic and acyclic ethers	15			•
1.4-Butanol			•	
Acetone		•		
Formic acid 10%			•	
Ammonium hydroxide 25%				•
Ammonia salts				•
Ammonium Sulphate 5%				•
Boric acid			•	
Diethylene glycol			•	
Acetic acid 20%		•		
Formaldehyde solution 30-50%				•

Continued on next page.



### Chemical Resistance List:

Raw Material	TG	Low (<8 hrs)	Medium (<72 hrs)	High (<14 days)
Urea technical				•
Melamine				•
Methanol			•	
Monoethylene glycol			•	
Sodium hydroxide 50%				•
Paraformaldehyde				•
P-Toluene sulfonamide 98%			•	
Nitric acid 62%		•		
Sulphuric acid <51%			•	
Evaporated salt				•
Triethanol amine 42.5%				•
Citric acid			•	

Note: Chemical exposure may lead to color changes on the surface of the coating. This does not however, affect the resistance. All values determined at a temperature of +20°C.

Key: TG=Test group/test liquid resistant =limited resistance, discoloration=0

### Dew Point Table (in accordance with ZTV-SIB 90)

Air temperature	Dew point temperatures in °C at a relative humidity of										
	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
2°C	-7.7	-6.56	-5.43	-4.40	-3.16	-2.48	-1.77	-0.98	-0.26	0.47	1.20
4°C	-6.11	-4.88	-3.69	-2.16	-1.79	-0.88	-0.09	0.78	1.62	2.44	3.20
6°C	-4.49	-3.07	-2.10	-1.05	-0.08	0.85	1.86	2.72	3.62	4.48	5.38
8°C	-2.69	-1.61	-0.44	0.67	1.80	2.83	3.82	4.77	5.66	6.48	7.32
10°C	-1.26	0.02	1.31	2.53	3.74	4.79	5.82	6.79	7.65	8.45	9.31
12°C	0.35	1.84	3.19	4.46	5.63	6.74	7.75	8.69	9.60	10.48	11.33
14°C	2.20	3.76	5.10	6.40	7.58	8.67	9.70	10.71	11.64	12.55	13.36
15°C	3.12	4.65	6.07	7.36	8.52	9.63	10.70	11.69	12.62	13.52	14.42
16°C	4.07	5.59	6.98	8.29	9.47	10.61	11.68	12.66	13.63	14.58	15.54
17°C	5.00	6.48	7.92	9.18	10.39	11.48	12.54	13.57	14.50	15.36	16.19
18°C	5.90	7.43	8.83	10.12	11.33	12.44	13.48	14.56	15.41	16.31	17.25
19°C	6.80	8.33	9.75	11.09	12.26	13.37	14.49	15.47	16.40	17.37	18.22
20°C	7.73	9.30	10.72	12.00	13.22	14.40	15.48	16.46	17.44	18.36	19.18
21°C	8.60	10.22	11.59	12.92	14.21	15.36	16.40	17.44	18.41	19.27	20.19
22°C	9.54	11.16	12.52	13.89	15.19	16.27	17.41	18.42	19.39	20.28	21.22
23°C	10.44	12.02	13.47	14.87	16.04	17.29	18.37	19.37	20.37	21.34	22.23
24°C	11.34	12.93	14.44	15.73	17.06	18.21	19.22	20.33	21.37	22.32	23.18
25°C	12.20	13.83	15.37	16.69	17.99	19.11	20.24	21.35	22.27	23.30	24.22
26°C	13.15	14.84	16.26	17.67	18.90	20.09	21.29	22.32	23.32	24.31	25.16
27°C	14.08	15.68	17.24	18.57	19.83	21.11	22.23	23.31	24.32	25.22	26.10
28°C	14.96	16.61	18.14	19.38	20.86	22.07	23.18	24.28	25.25	26.20	27.18
29°C	15.85	17.58	19.04	20.48	21.83	22.94	24.28	25.23	26.21	27.26	28.18
30°C	16.79	18.44	19.96	21.44	23.71	23.94	25.11	26.10	27.21	28.19	29.09
32°C	18.62	20.28	21.90	23.26	24.65	25.79	27.08	28.24	29.23	30.16	31.17
34°C	20.42	22.19	23.77	25.19	26.54	27.85	28.94	30.09	31.19	32.13	33.11
36°C	22.23	24.08	25.50	27.00	28.41	29.65	30.88	31.97	33.05	34.23	35.06
38°C	23.97	25.74	27.44	28.87	30.31	31.62	32.78	33.96	35.01	36.05	37.03
40°C	25.79	27.66	29.22	30.81	32.16	33.48	34.69	35.86	36.98	38.05	39.11
45°C	30.29	32.17	33.86	35.38	36.85	38.24	39.54	40.74	41.87	42.97	44.03
50°C	34.76	36.63	38.46	40.09	41.58	42.99	44.33	45.55	46.75	47.90	48.98

The dew point table indicates the surface temperature at which condensation occurs-dependent on the air temperature and relative humidity. Example: At an air temperature of +20°C and relative humidity of 70%, the dewpoint occurs with a surface temperature of +14.4°C. If the surface thermometer shows a value less than +17.4°C (+14.40°C & +3°C safety factor), then coating work is no longer possible.

