

## CONSTRUCTION METHOD

### Waterproofing for Basement floor using Lemax-3mm-GY-APP



#### Field

Lemax 3mm GY-APP waterproof membrane is used for roofs, toilet floors, basements (Substratum or intermediate layer in multi-layer waterproofing system).

#### Product Description

LEMEX waterproof membrane is a high quality torch membrane, manufactured from elastomeric BPP polymer bitumen resin, refined bitumen compound with high molecular weight polymer, reinforced with nonwoven polyester mesh, thus the product guarantees performance under all conditions.

#### Application

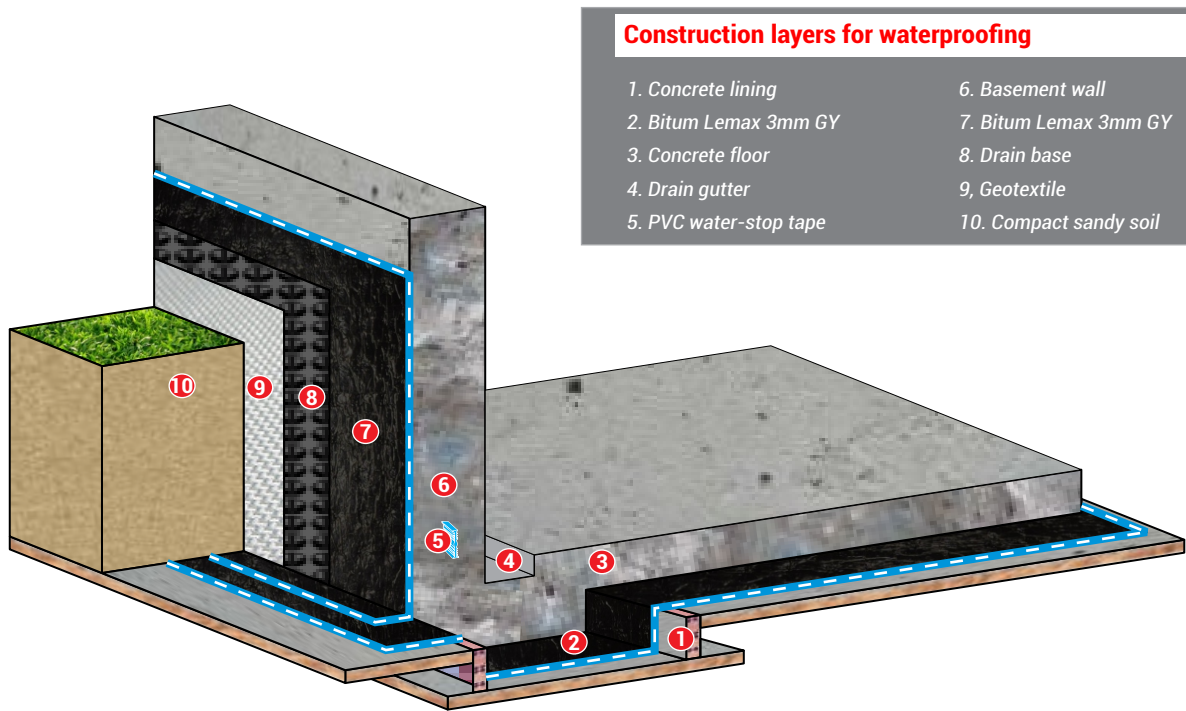
LEMEX membranes are suitable for many waterproofing applications such as foundation walls, tunnels, basements, roofs, parking floors and other civil works. Concrete floors and roofs, underground tanks, parking decks, concrete structures for storage tanks underground road, tunnels, bridge decks, water treatment facilities, swimming pools.

#### Advantage features

- Easy to apply with a torch
- Very good dimensional stability
- Absolutely waterproof
- Very good high temperature performance
- Environmental friendliness
- High mechanical properties

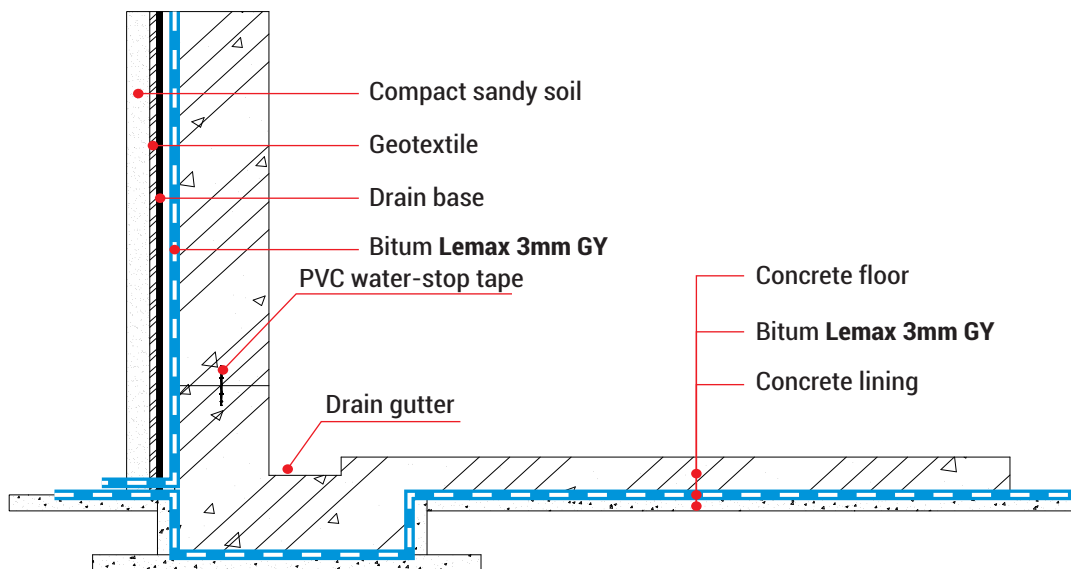
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### System structure











#### Construction layers for waterproofing

- |                        |                        |
|------------------------|------------------------|
| 1. Concrete lining     | 6. Basement wall       |
| 2. Bitum Lemax 3mm GY  | 7. Bitum Lemax 3mm GY  |
| 3. Concrete floor      | 8. Drain base          |
| 4. Drain gutter        | 9. Geotextile          |
| 5. PVC water-stop tape | 10. Compact sandy soil |



## Waterproofing for Basement floor using Lemax-3mm-GY-APP

### Product images and construction equipment and tools

		
Lemax 3mm GY-APP	Lining Lemax Primer SB	Revinex
		
Industrial Torch	Neotex <sup>®</sup> PU Joint	Jointex <sup>®</sup>
		
Brush – Roller	Stirrer	

### Construction

- **APPLYING TORCHED ON MEMBRANES LEMAX 3mm GY-APP**

- **Surface preparation**

The surface must be cleaned of impurities such as sand, dust, dirt, oil. All concave surfaces, defects, loose textures, and loose concrete must be removed and repaired with Revinex mixed cement mortar.

- **Applying Primer**

Use **Lemax SB Primer** (solvent-based and oxidized bitumen primer) rated at 0.2kg/m<sup>2</sup> to apply on smooth and dry surfaces by brush, roller or spray. It is only allowed to apply the waterproofing membrane when the primer has dried for about 1 hour. The low viscosity of the paint makes it easy to get into the concrete holes, helping to better bond between the primer and the concrete surface. In addition, Primer also acts as a binder for dust that accumulates on concrete surfaces left after cleaning.

## Waterproofing for Basement floor using Lemax-3mm-GY-APP

### ▪ Torching application

- Lemax 3mm GY-APP waterproof membrane is glued using a gas torch. It is recommended to use a handheld torch because it is easier to use.
- If a multi-head torch is used, care must be taken to ensure that the torch temperature is uniform and to avoid overheating the waterproofing membrane. Start torch from the polyethylene layer of the unfolded parts of the membrane roll.
- The appropriate torch method is to make the torch flame in the shape of an "L", according to the ratio of about 75% of the temperature for the roll area and 25 percent for the texture area, including the area of the surrounding membrane that was previously glued. Thoroughly torch the lower part of the membrane until the bitumen surface is glossy and begins to flow.
- Unroll of the membrane roll evenly forward and secure it using rollers to ensure good adhesion to the textured surface. The torch should be moved from one edge to the other and up to the edge when slowly unroll the membrane and gluing to the surface. Pay attention to avoid moving the roll of waterproof membrane when gluing. When one end has been glued, unroll the opposite end that has not been glued, doing them in the same way.
- When the next roll is glued, the torch is applied to both rolls and the successive sheets are overlapped with the previous sheet. Make sure the entire coil is heated evenly not only the overlapping area but also with the extension around the joint.

### ▪ Sealed

- Torch both overlapping seams and use the trowel to create the best connection. The torch temperature is confirmed to be sufficient when the bitumen melts even at the edges of the applied membrane.
- Excess compound should be pressed and flattened into the joints using a hot trowel. At the non-adhesive positions must be lifted and retorched. Do not seal the above locations by torching on the surface above the membrane.



Baseline corner treatment



torch in Standard way



Treating the neck of the drain pipe



Finish the neck of the pipe and the Baseline corner

## Waterproofing for Basement floor using Lemax-3mm-GY-APP

### ▪ Edge overlap

- Start gluing the waterproofing membrane from the lowest points or grooves, as water will flow through or parallel to those grooves but not back. The residue at the membrane levels will be used to install the overlapping panels in order, the next membrane will overlap the previous one. Begin construction of the membrane by unrolling the roll of **Lemax 3mm GY-APP** membrane and aligning it with the side seams.
- Unroll half of the roll and stand on the unrolled part to prevent the roll from moving. The minimum overlap at the side of the membrane is 70mm and the end is 100mm.



Surface preparation



Applying primer



Construction of torched on membrane



Finish surface

### • NOTES WHEN APPLYING TORCHED ON MEMBRANE Lemax 3mm GY-APP

- At overlap, the seam must be from 7cm to 10cm, use a trowel to seal the junction.
- Weak sites need reinforcement: This prolongs the adhesion quality and membrane life. Therefore, focus on reinforcing weak points such as: Baseline corners, expansion joints, pipe necks.
- If there is a phenomenon of air bubbles appearing to blister the membrane after application, puncture the area with a sharp object to release all the air, then glue another sheet over with an overlap seam of 50mm.
- After applying the waterproof membrane system, it is necessary to immediately make a protective layer to avoid tearing or damaging the membrane due to circulation, transportation of tools and equipment, and steel placement.
- Apply the protective layer as soon as possible. If left for a long time, the membrane will be blistered from the glued surface due to expansion under temperature changes.