

## Nuplex

### Tanking / Below ground waterproofing - Troubleshooting

The issues below are related to events after contract completion.

#### A. **Internal floor / wall corner leaks**

Some issues may be:

- If the slab has polythene underneath then the leak may well be due to the polythene itself at the base transition. Bituthene systems do not tie with Polythene. This is a very common water entry point. This is particularly true of leaks in heavy rain. The back-fill area fills with water and water penetrates through the polythene. Polythene in this area is always ripped and torn during construction. This is the number one cause of leaks. The wall is waterproofed but the slab and corner transition are not

Nuplex recommend Preprufe under the slab and Bituthene on the external wall. In this manner the horizontal to vertical transition is managed.

- The Bituthene top termination is not well adhered and water is getting behind the membrane. Refer to contractor. Nuplex recommend fixed metal termination tie bars. Also the termination may be incorrectly done below the FGL ( finished ground level) allowing water to track at the reverse.
- Lack of effective field drains to drain site. The water may rise and find a defect. This is particularly true if Polythene is under the slab. Polythene damproofed floors must be fully drained.
- Also damage to the waterproofing during backfilling can be an issue.

#### B. **Water Ingress in driving rain.**

In almost all cases this is due to water ingress at higher levels and running behind the membrane and into the building.

#### C. **Blisters in Tanking membrane**

The contractor has not fully primed and then rolled the membrane during construction.

#### D. **Blisters openings in the overlap.**

The contractor has not overlapped cleanly and evenly. Heavy roller treatment is specified. Possible failure to use Bituthene mastic on any defects (birds mouths).

#### E. **Protection sheet damage**

This is due to incorrect care.

Nuplex recommend NPX to ensure full protection and to allow drainage.

Backfill will damage membranes if there is inadequate protection.

#### F. **Incorrect Direction of Falls**

Falls to drains are very important to create sites that self-dry and do not promote standing water. External water should be directed away from the walls, towards drains, field drains.

### G. Field drains

These must be effective to cover heavy rainfall and be clear and free.

The only sites that do not have drainage are fully below ground sites and must be fully tanked.

- le Preprufe & Preprufe horizontal and vertical.
- Preprufe & Bituthene. horizontal and vertical.

### H. Other Sources

Leaks may be coming from walls, doors and windows. The water is draining down block cavities to the basement interface.

### I. Contractors

Approve, experienced contractors must be used.

A final site inspection must be undertaken. This is the correct time to fix issues or to take precautionary measures.

Double safety is best.

### Remediation

It is difficult to access backfilled areas to remedy. That is why experienced contractors must be used and correct post installation inspection is undertaken.

Waterproofing on the inside may be undertaken.

Use Aquaguard 101 system. This is a water based epoxy coating. Refer data.

Carefully follow instructions including using a fillet of K102 / K125 epoxy at the internal wall / floor interface. Also then laminate that interface with fiberglass. Then Aquaguard the full wall. Two coats at 3m<sup>2</sup> / Lt / coat. Two coats. A full wall and floor laminate is most effective ( Situclad EWS).

