

RETAINING WALL SYSTEM



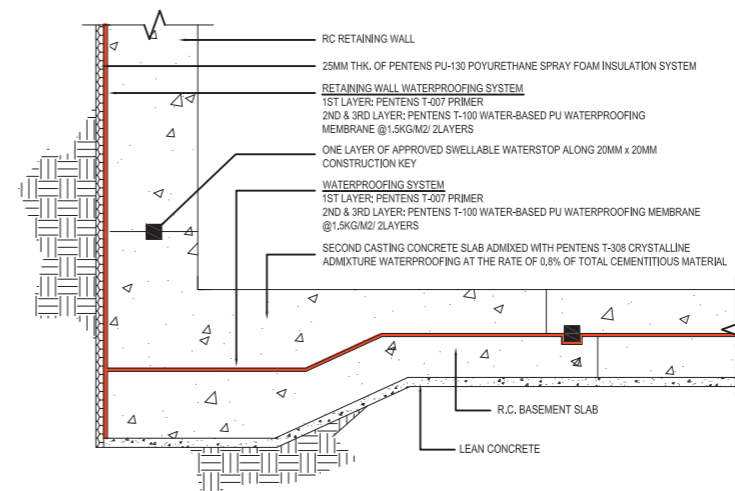
Retaining walls are structures designed to restrain soil to unnatural slopes, so they are often made in concrete to make them more durable or long lasting. These retaining walls can easily get soaked in water during the rainy seasons, causing the formation of mold. Proper waterproofing system must be done to prevent water from seeping into the walls and compromising its structure and finish. The best possible solution to fully waterproofing retaining walls is using **PENTENS T-100** Water-based PU Waterproofing Membrane. **PENTENS T-100** is seamless and will bond to most construction surfaces, it is protected at the time of backfilling with the correct protection boards.

Pentens T-100 Technical Data

| Elongation ASTM D412-06ae2 (%) | Tensile Strength (kgf/cm ²) ASTM D 412-98 | Tear Strength (kgf/cm ²) CNS 6986 | Puncture (kgf) ASTM E154 | Chemical Resistance 10% HCOOH, 600,24hrs |
|-----------------------------------|--|--|-----------------------------|---|
| 1128 | 20.90 | 11 | 1.6 | No Changes on the surface of the sample |

Pentens PU-130 Advantages :

- Greater structural integrity.
- Can be applied to damp surface.
- Multi-purpose for a wide range of building applications.
- Can be trimmed, sanded and sawn.
- Painted and plastered.
- Good adhesive to most construction surface, such as wood, brick, concrete, metal and many plastics.



Green Waterproofing & Insulation Application

| | |
|------------------|------------------|
| Primer | : Pentens T-007 |
| 1st Coat | : Pentens T-100 |
| 2nd Coat | : Pentens T-100 |
| Insulation Layer | : Pentens PU-130 |

PENTENS PU-130 Insulation Technical Data

| | |
|---------------------------|--------------------------|
| Compressive Strength | : 32kg/m ² |
| Tensile Strength | : 1.1kgf/cm ² |
| Thermal Conductivity | : 0.028 - 0.038W/(m.k) |
| Water Absorption (7 days) | : 0.24kg/m ² |



Pentens T-100 Advantages:

- Low VOC.
- Environmentally friendly.
- Easy application.
- High elasticity.
- Superb adhesive strength.
- Can be applied directly on damp or wet surfaces.
- Suitable in hot and humid tropical climate.
- Resistant to bubbling or side osmosis.
- No phenomenon even submerge in water for a long time.
- Capable of re-application.
- Non-toxic.

Pentens T-100 & Pentens PU-130 Green Test Data

Heavy Metals:

(EPA 3025 / EPA 6010B : ICP)

| | |
|------------------------|--------------|
| A. Cadmium (d) | Not Detected |
| B. Lead (Pd) | Not Detected |
| C. Total Chromium (Cr) | Not Detected |
| D. Mercury (Hg) | Not Detected |

| | |
|---|--------------------------------|
| Volatile Organic Compounds (ISO 11890-2) (g/L) | 0.53 (T-100) 17.67 (PU-130) |
|---|--------------------------------|

| | |
|---|--------------|
| Total Halogenated Organic Solvent (ISO 11890-2) (%) | Not Detected |
|---|--------------|

| | |
|--|--------------|
| Total Aromatic Organic Solvent (ISO 11890-2) (%) | Not Detected |
|--|--------------|

| | |
|--------------------------------------|--------------|
| Epichlorohydrin (ISO 11890-2) (%) | Not Detected |
|--------------------------------------|--------------|

| | |
|---|--------------|
| N-Methyl Pyrrolidinone (ISO 11890-2) (%) | Not Detected |
|---|--------------|

| | |
|---|--------------|
| Formaldehyde (High Performance Liquid Chromatography) (%) | Not Detected |
|---|--------------|

| | |
|--|--------------|
| Alkyl Phenol Ethoxylate (LCMS-MS) (%) | Not Detected |
|--|--------------|

| | |
|--------------------------------------|-----|
| Flash Point (ASTM D3828-07a) (°C) | >61 |
|--------------------------------------|-----|