Environmentally friendly product

绿色建材，亚洲领航
**GO GREEN**

**DJI International (the Group),** established in 1989, is one of the leading manufacturers and distributors of building material for all industry which include raised floor system, water-based resin, water resistant floor, low pressure cracks, silicon-rubber waterproofing paint, soft resin mortal for waterproofing and high strength epoxy flooring.

The key vision of the Group is through dynamic and innovative management while teamwork to improve quality of products and services in order to commit excellences. On top of that, our team of architects and engineers are constantly searching for new innovative ideas and processes. Therefore, the group is assured of superior quality, versatility, durable and reliable products.

The Group believes that trust is the most important key in business activities and recognizes improvement in the quality of products and services will gain more consumers’ and customers’. Besides that, the Group also aims for a better living society and a wholesome environment.

In parallel with the industrial growth in Malaysia, the Group has diversified into designing and manufacturing of various kinds of industrial building materials. These manufacturing activities have significantly contributed to the role of import substitutions. With the achievement of ISO 9002, recognition in its manufactured products, the Group is presently exporting its manufactured products to 6 countries in Asia Pacific and 4 countries in Middle East.

**DJI International** is currently establishing distribution centers in other ASEAN countries according to their cost competitiveness and resources, e.g. Dong Ji (M) Sdn. Bhd. (since year 2000).

The Group has also increased its research and development activities in all facets of product design and process innovation, gearing it to move towards the production of greater value-added products as well as improving current production techniques and process based in Taiwan.

Through its globalization plan, the Group seeks to continuously provide quality products and engineering services to all level of industries in Malaysia. Simultaneously, the Group also looks forward to position Taiwan industrial products to be recognized in the international market.

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**Our Mission**

- Environmentally Friendly
- Clean, Aesthetic, Flexibility
- Comfortable and Eternal Quality

**Why Choosing PENTENS Green Waterproofing ...**

- Low VOC.
- A long-term warranty against defects.
- Over 20 years Relevant Specialist in Waterproofing Experience.
- Regional Manufacturing Facility.
- Excellent Quality, Service and Competitive Price.
GREEN ROOF SYSTEM

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 submerges in water for a long time.
- Capable of re-application.
- Non-toxic.

PENTENS T-100 Excellent Elongation (Sirim test 1128.60%)

<table>
<thead>
<tr>
<th>Elongation</th>
<th>Tensile Strength</th>
<th>Tear Strength</th>
<th>Puncture</th>
<th>Chemical Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1128.6</td>
<td>20.90</td>
<td>11</td>
<td>1.6</td>
<td>No Changes on the surface of the sample</td>
</tr>
</tbody>
</table>

Method of Statement

1. Open the cover of T-100.
2. Mix thoroughly.
3. Apply directly to construction surface by using brush, roller or spray method.
4. Finish with cement screed or tile.

Heavy Metals:
- Cadmium (d) Not Detected
- Lead (Pd) Not Detected
- Total Chromium (Cr) Not Detected
- Mercury (Hg) Not Detected

Volatile Organic Compounds (ISO 11890-2) (g/L): 0.53
Cool roof is a roof that can deliver high solar reflectance as well as high thermal emittance. Cool roof system provides a GREEN alternative energy and efficient solution to your insulation, roofing and waterproofing needs. Spray Polyurethane Foam Pentens PU-130 uses to reduce thermal conductive heat transfer and its air barrier properties helps reduce convective heat transfer; finished layer Pentens Solar Flex T-202 Ceramic Coating with solar reflectance Index (SRI) 110.

Advantages:
- Low VOC.
- Environmentally friendly.
- Excellent adhesion and durability.
- Excellent weather resistance.
- Excellent abrasion resistance.
- Good impact strength.
- Good flexibility.
- Freeze-thaw resistant.

### Pentens Solar Flex T-202 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>1.50 ± 0.1kg/liter</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>&gt;12 kgf/cm²</td>
</tr>
<tr>
<td>Elongation</td>
<td>&gt;60%</td>
</tr>
<tr>
<td>Thermal Transmission</td>
<td>&lt;0.12 W/m · K</td>
</tr>
<tr>
<td>Solar Reflectance Index (SRI)</td>
<td>110</td>
</tr>
</tbody>
</table>

### Pentens Solar Flex T-202 Green Test Data

- Heavy Metals:
  - 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): 3.53

### Product Application

**RC Roof**
- Primer: Pentens WP Primer T-007
- 1st Layer: Pentens EasySov WP5
- 2nd Layer: Pentens EasySov WP5

**Metal Roof**
- Primer: Pentens WP Primer T-007
- 1st Layer: Pentens Solar Flex T-202
- 2nd Layer: Pentens Solar Flex T-202

### Method of Statement

1. Mix thoroughly. (Can add 0.3kg clean water to mix container.)
2. Apply directly to construction surface by using brush, roller or spray method.
3. Repeat step 2 after 4 hours. (待第一层干后(4小时以上), 再以步骤2的方式涂佈第二层在施工面上。
4. Finished. (待24小时养护干燥後完成。)

<table>
<thead>
<tr>
<th>Surface temp.</th>
<th>Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoated</td>
<td>46.7</td>
</tr>
<tr>
<td>Coated</td>
<td>38.4</td>
</tr>
</tbody>
</table>

**BEST CHOICE**

MANUFACTURER RECOMMENDED
PENTENS re-roof system has been designed to provide a green, toughness and long-term durability with the waterproofing of existing roof. PENTENS Fleseal T-200 UV resistant elastomeric waterproofing coating is an ideal choice of waterproofing coating for re-roof system. With the fast set nature, this system can help to save time with the ability to return substrate to service in minutes.

### Pentens Fleseal T-200 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (%)</td>
<td>&gt;148</td>
</tr>
<tr>
<td>Tensile Strength (kgf/cm²)</td>
<td>56.5</td>
</tr>
<tr>
<td>Solid Content (%)</td>
<td>&gt;60</td>
</tr>
<tr>
<td>Reflectivity (%)</td>
<td>85</td>
</tr>
</tbody>
</table>

### Advantages:
- Low VOC.
- Water based, environmentally friendly.
- Air and UV protection.
- Chemical resistant and waterproof.
- Superb adhesive strength, suitable use on any surface.
- Has a high rate of water vapor transmission which permits moisture in the substrate to escape without causing blistering, peeling or flaking.
- Prevention of ravages of acid rain, freeze-thaw, cycles, sunlight, bacteria and fungus.
- Non-toxic.

### Pentens Fleseal T-200 Green Test Data

<table>
<thead>
<tr>
<th>Compound</th>
<th>Value (ISO 11890-2) (g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cadmium (d)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead (Pd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium (Cr)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury (Hg)</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

Heavy Metals:
- (EPA 3025 / EPA 6010B : ICP)
- Volatile Organic Compounds (ISO 11890-2) (g/L) 10.19

### Method of Statement

1. Open the cover of Fleseal T-200.
   - (可將Fleseal T-200的蓋子打開。)
2. Mix thoroughly. (Can add 0.3kg clean water to mix container.)
   - (將材料均勻攪拌。 (可加0.3kg的清水進入混合))
3. Apply directly to construction surface by using brush, roller or spray method.
   - (用滾筒或刷子均勻塗佈在施工面。)
4. Also can use to internal or external wall. (white colour finishing)
   - (亦可塗佈在建築物內外。 (白色完成面))
5. Grey colour finishing.
   - (灰色完成面。)
6. Green colour finishing.
   - (青色完成面。)

### Product Application

- Primer : Pentens WP Primer T-007
- 1st Layer : Pentens Fleseal T-200
- 2nd Layer : Pentens Fleseal T-200
- Primer : Pentens WP Primer T-007
- 1st Layer : Pentens EasySov WP5
- 2nd Layer : Pentens EasySov WP5
TOILET & BATHROOM SYSTEM

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

Pentens T-100 Green Test Data

Heavy Metals:

- Cadmium (Cd) Not Detected
- Lead (Pb) Not Detected
- Total Chromium (Cr) Not Detected
- Mercury (Hg) Not Detected

Volatile Organic Compounds

0.53 g/L (ISO 11890-2)

Product Application

<table>
<thead>
<tr>
<th>Primer</th>
<th>1st Layer</th>
<th>2nd Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentens WP Primer T-007</td>
<td>Pentens T-100</td>
<td>Pentens T-100</td>
</tr>
<tr>
<td>Pentens EasyCoat WP1</td>
<td>Pentens EasyCoat WP1</td>
<td></td>
</tr>
</tbody>
</table>

Method of Statement

1. Open the cover of T-100.
2. Mix thoroughly.
3. Apply directly to construction surface by using brush, roller or spray method.
4. Finish with cement screed or tiling.

Pentens T-100 Excellent Elongation (Sirim test 1128.60%)
Balcony, Kitchen & Yard System
阳台, 厨房及洗衣间

Balcony, kitchen and yard is the perfect addition to any home, so we need to make sure that area is properly waterproofed in order to ensure that there is no damage. Pentens T-100 cementitious waterproofing is the most preferred type of waterproofing for yard, balcony and kitchen. Cementitious waterproofing uses a cement based compound that has special additives and is mixed with water and liquid bonding agents in order to give a waterproof coating. The mix is applied in slurry form.

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 submerges in water for a long time.
- Capable of re-application.
- Non-toxic.

Pentens T-100 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (ASTM D412-06 #)</td>
<td>1128.6</td>
</tr>
<tr>
<td>Tensile Strength (kgf/cm²)</td>
<td>20.90</td>
</tr>
<tr>
<td>Tear Strength (kgf)</td>
<td>11</td>
</tr>
<tr>
<td>Puncture (kgf)</td>
<td>1.6</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10% HCOOH, 80°C, 24hrs</td>
</tr>
</tbody>
</table>

Pentens T-100 Green Test Data

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Metals:</td>
<td></td>
</tr>
<tr>
<td>A. Cadmium (d)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead (Pd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium (Cr)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury (Hg)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>0.53</td>
</tr>
</tbody>
</table>

Product Application

<table>
<thead>
<tr>
<th>Primer</th>
<th>1st Layer</th>
<th>2nd Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentens WP Primer T-007</td>
<td>Pentens EasyCoat WP1</td>
<td>Pentens EasyCoat WP1</td>
</tr>
<tr>
<td>Pentens T-100</td>
<td>Pentens T-100</td>
<td></td>
</tr>
</tbody>
</table>

Method of Statement

1. Open the cover of T-100.
2. Mix thoroughly.
3. Apply directly to construction surface by using brush, roller or spray method.
4. Finish with cement screed or tile.
Car Porch normally constructed with cement screed protected surface. The surface aesthetically needs a layer of decorative protection to prevent mold, waterproof, cover fine crack lines, resists to weather. PENTENS EasySov WPS is based on a newly developed Acrylic Polymers and it is dramatically reduces solar heat absorption in either air-conditioned or non-air conditioned buildings. PENTENS EasySov WPS is environmentally friendly and low Voc’s material. It takes the majority of the heat load off a building’s skin and reduces temperatures to approximately that of outside shade.

### Pentens EasySov WP5 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Content (%)</td>
<td>&gt;80</td>
</tr>
<tr>
<td>Elongation (%)</td>
<td>&gt;60</td>
</tr>
<tr>
<td>Thermal Transmission (W/mK)</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Corrosion Resistance (ASTM G8-88 60 days)</td>
<td>No peeling, cracking, blistering</td>
</tr>
</tbody>
</table>

### Advantages:
- Low VOC.
- Water based, environmentally friendly.
- Air and UV protection.
- Chemical resistant and waterproof.
- Superb adhesive strength, suitable use on any surface.
- Has a high rate of water vapor transmission which permits moisture in the substrate to escape without causing blistering, peeling or flaking.
- Prevention of ravages of acid rain, freeze-thaw, cycles, sunlight, bacteria and fungus.
- Non-toxic.

### Pentens Flesseal T-200 Green Test Data

<table>
<thead>
<tr>
<th>Heavy Metals (EPA 3025 / EPA 6010B : ICP)</th>
<th>Not Detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cadmium (Cd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead (Pd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium (Cr)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury (Hg)</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

| Volatile Organic Compounds (ISO 11890-2) (g/L) | 10.19 |

### Method of Statement

1. Open the cover of EasySov WPS. 轻轻揭开EasySov WPS的盖子。
2. Mix thoroughly. (Can add 0.3kg clean water to mix container.) 彻底搅拌均匀。 (可加0.3kg的清水进入混合)
3. Apply directly to construction surface by using brush, roller or spray method. 用滚筒或刷子均勻涂佈在施工面上。
4. Also can use to internal or external wall. (White colour finishing) 浅灰色完成面。
5. Grey colour finishing. 灰色完成面。
6. Grey colour finishing. 浅灰色完成面。

### Car Porch System

**Car Porch System**

**Advantages:**
- Low VOC.
- Water based, environmentally friendly.
- Air and UV protection.
- Chemical resistant and waterproof.
- Superb adhesive strength, suitable use on any surface.
- Has a high rate of water vapor transmission which permits moisture in the substrate to escape without causing blistering, peeling or flaking.
- Prevention of ravages of acid rain, freeze-thaw, cycles, sunlight, bacteria and fungus.
- Non-toxic.

**Pentens EasySov WP5 Technical Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Content (%)</td>
<td>&gt;80</td>
</tr>
<tr>
<td>Elongation (%)</td>
<td>&gt;60</td>
</tr>
<tr>
<td>Thermal Transmission (W/mK)</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Corrosion Resistance (ASTM G8-88 60 days)</td>
<td>No peeling, cracking, blistering</td>
</tr>
</tbody>
</table>

**Advantages:**
- Low VOC.
- Water based, environmentally friendly.
- Air and UV protection.
- Chemical resistant and waterproof.
- Superb adhesive strength, suitable use on any surface.
- Has a high rate of water vapor transmission which permits moisture in the substrate to escape without causing blistering, peeling or flaking.
- Prevention of ravages of acid rain, freeze-thaw, cycles, sunlight, bacteria and fungus.
- Non-toxic.

**Pentens Flesseal T-200 Green Test Data**

<table>
<thead>
<tr>
<th>Heavy Metals (EPA 3025 / EPA 6010B : ICP)</th>
<th>Not Detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cadmium (Cd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead (Pd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium (Cr)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury (Hg)</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

| Volatile Organic Compounds (ISO 11890-2) (g/L) | 10.19 |

**Product Application**

**Primer** : Pentens WP Primer T-007

**1st Layer** : Pentens EasySov WP5

**2nd Layer** : Pentens EasySov WP5

**Primer** : Pentens WP Primer T-007

**1st Layer** : Pentens Flesseal T-200

**2nd Layer** : Pentens Flesseal T-200
Swimming pools are constantly subject to water pressure. The waterproofing also needs to be able to cope with the pool chemicals. If not properly waterproofed, it will suffer from water damage such as cracking and flaking, and it will also be damaged by the pool chemicals used. Pentens T-100 waterproofing is the most preferred type of waterproofing for swimming pools. Pentens T-100 is a single component which is newly developed polymer of MMA, natural rubber, and polyurethane combines with the reaction with asphalt and then being modified and further emulsified to form elastic waterproof membrane.

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

Pentens T-100 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (%)</td>
<td>1128.60</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>20.90</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>11</td>
</tr>
<tr>
<td>Puncture (kgf)</td>
<td>1.6</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>No Changes on the surface of the sample</td>
</tr>
</tbody>
</table>

Heavy Metals:
- A. Cadmium (Cd) Not Detected
- B. Lead (Pb) Not Detected
- C. Total Chromium (Cr) Not Detected
- D. Mercury (Hg) Not Detected

Volatile Organic Compounds (ISO 11890-2) (g/L): 0.53

Pentens T-100 Green Test Data

<table>
<thead>
<tr>
<th>Heavy Metals</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cadmium</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

Product Application

1. Open the cover of T-100.
2. Mix thoroughly.
3. Apply directly to construction surface by using brush, roller or spray method.
4. Finish with cement screed or tiles.

Method of Statement | 施工方法

1. 打开T-100的盖子。
2. 将材料均匀搅拌。
3. 用滚筒或刷子均匀涂布在施工面上。
4. 涂布完成后并铺盖沙灰或瓷砖。

PENTENS T-100 Excellent Elongation (Sirim test 1128.60%)
LIFT PIT SYSTEM

Lift pit is the lowest section of the lift shaft that generally falls below ground level which makes it susceptible to water ingress. PENTENS T-100 water based PU waterproofing membrane is the ideal choice for lift pit because it complied in high elongation with excellent properties. It’s easy application with brush and usually applied to the external face of pit and walls.

Pentens T-100 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (%)</td>
<td>1128.6</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>20.90 kgf/cm²</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>11 kgf/cm²</td>
</tr>
<tr>
<td>Puncture</td>
<td>1.6 kgf</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>No Changes</td>
</tr>
</tbody>
</table>
### Pentens T-100 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation</td>
<td>1128.6%</td>
<td>ASTM D412-06a22 (%)</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>20.90 (kgf/cm²)</td>
<td>ASTM D 412-98</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>11 (kgf/cm²)</td>
<td>CNS 6886</td>
</tr>
<tr>
<td>Puncture</td>
<td>1.6</td>
<td>ASTM E 154</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>No Changes on the surface of the sample</td>
<td></td>
</tr>
</tbody>
</table>

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

### Product Application

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mix thoroughly.鸦来均匀搅拌。</td>
</tr>
<tr>
<td>2</td>
<td>Apply directly to construction surface by using brush, roller or spray method.用滚筒或刷子均匀涂布在施工面上。</td>
</tr>
<tr>
<td>3</td>
<td>Finish with cement screed or tiles.涂覆完成后并铺盖沙灰或瓷砖。</td>
</tr>
</tbody>
</table>

### Heavy Metals

- **A.** Cadmium (Cd): Not Detected
- **B.** Lead (Pb): Not Detected
- **C.** Total Chromium (Cr): Not Detected
- **D.** Mercury (Hg): Not Detected

### Pentens T-100 Green Test Data

**Volatile Organic Compounds**

<table>
<thead>
<tr>
<th>Compounds</th>
<th>Value (g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile Organic Compounds</td>
<td>0.53</td>
</tr>
</tbody>
</table>

**Heavy Metals Test Data**

- **A.** Cadmium (Cd): Not Detected
- **B.** Lead (Pb): Not Detected
- **C.** Total Chromium (Cr): Not Detected
- **D.** Mercury (Hg): Not Detected
Pentens T-308 Advantages:
- Low VOC.
- Environmentally friendly.
- It provides significant cost saving because it eliminates labour cost for the application process.
- Integral protection for the ENTIRE concrete.
- Permanent protection even if the surface is damaged.
- Can seal the capillaries and minor shrinkage cracks up to 0.4mm by crystal formation.
- Protection from any direction.
- Non-toxic.

Pentens T-308 Green Test Data

<table>
<thead>
<tr>
<th>Heavy Metals: (EPA 3025 / EPA 6010B : ICP)</th>
<th>Not Detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Cadmium (Cd)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>B. Lead (Pb)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>C. Total Chromium (Cr)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>D. Mercury (Hg)</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

| Volatile Organic Compounds (ISO 11890-2) (g/L) | 1.21 |
| 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 |

Waterproofing is needed anytime a structure is built at ground level or below ground. Higher water table causes hydrostatic pressure to be exerted underneath basement floors and against basement walls. Hydrostatic pressure forces water in through cracks, openings in footing-foundation wall joint and up through floor cracks. **PENTENS T-308 Crystalline Admixture** Waterproofing is recommended in the application, it causes a catalytic reaction that creates long chain complexes a non-soluble crystalline formation which crystallizes in the pores and capillary tracks.

**Pentens T-308 Technical Data**

<table>
<thead>
<tr>
<th>Water Adsorption</th>
<th>Potable Condition</th>
<th>Water Permeability</th>
<th>Chloride Content</th>
<th>Can Seal Hairline Crack</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.5%</td>
<td>Complied</td>
<td>15mm</td>
<td>Nil</td>
<td>up to 0.4mm</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (%)</td>
<td>1128.6</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>20.90</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>11</td>
</tr>
<tr>
<td>Puncture</td>
<td>1.6</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>No Changes on the surface of the sample</td>
</tr>
</tbody>
</table>

### Heavy Metals

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatile Organic Compounds (ISO 11890-2) (g/L)</td>
<td>0.53</td>
</tr>
</tbody>
</table>

### Advantages:

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

### Pentens T-100 Green Test Data

#### Product Application

1. **Primer:** Pentens WP Primer T-007
2. **1st Layer:** Pentens T-100
3. **2nd Layer:** Pentens T-100

4. **Primer:** Pentens WP Primer T-007
5. **1st Layer:** Pentens T-305
6. **2nd Layer:** Pentens T-305

### Method of Statement

1. Open the cover of T-100.
2. Mix thoroughly.
3. Apply directly to construction surface by using brush, roller or spray method.
4. Finish with cement screed or tiles.

PENTENS T-100 Excellent Elongation (Sirim test 1128.60%)
This application is for drinking and non-drinking water tanks either on new or old concrete. In both cases, the cement base products are ideal for this application. **PENTENS T-305** Cementitious waterproofing coating whereby could stand positive or negative pressure needs to be applied in order to protect the concrete and prevent any leakage of the contained liquid.

### Pentens T-305 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test Method/Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (%)</td>
<td>24.30</td>
<td>ASTM D 412 (Die C)</td>
</tr>
<tr>
<td>Tensile Strength (kgf/cm²)</td>
<td>8.30</td>
<td>ASTM D 412 (Die C)</td>
</tr>
<tr>
<td>Tear Strength (kgf/cm²)</td>
<td>7.20</td>
<td>ASTM D624</td>
</tr>
<tr>
<td>Puncture</td>
<td>9</td>
<td>ASTM E154</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>No Changes</td>
<td>10% HCOOH, 600-24hrs</td>
</tr>
</tbody>
</table>

### Advantages:
- Low VOC.
- Environmentally friendly.
- Pre-batched and ready for used.
- High workability.
- Good adhesive to sound substrate.
- Can be applied directly on damp or wet surface.
- Impermeable.
- Frost and salt resistance.
- Resist carbon dioxide penetration.
- Slightly flexible.
- Capable of re-application.
- Non-toxic.

### Pentens T-305 Green Test Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test Method/Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Metals:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.  Cadmium (d)</td>
<td>Not Detected</td>
<td>(EPA 3025 / EPA 6010B : ICP)</td>
</tr>
<tr>
<td>B.  Lead (Pd)</td>
<td>Not Detected</td>
<td></td>
</tr>
<tr>
<td>C.  Total Chromium (Cr)</td>
<td>Not Detected</td>
<td></td>
</tr>
<tr>
<td>D.  Mercury (Hg)</td>
<td>Not Detected</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>0.63</td>
<td>(ISO 11890-2) (g/L)</td>
</tr>
</tbody>
</table>

### Product Application

**Primer:** Pentens WP Primer T-007

1st Layer: Pentens T-305

2nd Layer: Pentens T-305

3rd Layer: Pentens T-305

**Primer:** Pentens WP Primer T-007

1st Layer: Pentens AB BRUSH

2nd Layer: Pentens AB BRUSH

3rd Layer: Pentens AB BRUSH

### Method of Statement

1. Add resin (part A) to a empty pail.
2. Add 4kg clean water to mix container.
3. Add powder (part B) to mix container.
4. Mix thoroughly.
5. Apply directly to construction surface by using brush, roller or spray method.
6. After 2 layers cover with cement render.

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Effective air conditioning is accomplished through the use of chiller tanks. This application enables a building to have an efficient air conditioning system to keep indoor temperature at a comfortable level. Water in the tank is cold exceeding freezing level, and the chilled water is pumped through the pipe channels in the building. The PENTENS Polyurethane Foam PU-130 is specified to insulate as well as to prevent condensation, while PENTENS SPU-1000 Polyurea is meant for waterproof purposes.

**Pentens SPU-1000 Advantages:**
- Low VOC.
- Environmentally friendly.
- High elasticity.
- Strong and tough, extremely high mechanical properties.
- Chemical resistance - very good resistance for wide range of industrial chemical.
- Hard wearing.
- Outstanding impact resistance.
- Non-skidded.
- Excellent bond strength to properly prepared substrates.
- No abnormality even submerges in water for a long time.
- Fast set return to service in minutes (Often second).
- Non-toxic.

**Pentens PU-130 & Pentens SPU-1000 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)
  - 1.0 (SPU-1000)
  - 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

**Green Waterproofing Application**

- **Primer:** Pentens WP Primer T-007
- **1st Layer:** Pentens SPU-1000
- **2nd Layer:** Pentens PU-130
- **3rd Layer:** Pentens SPU-1000

**PENTENS PU-130 Insulation Technical Data**

- **Density:** 32kg/m³
- **Tensile Strength:** 1.1kgf/cm²
- **Thermal Conductivity:** 0.028 - 0.038 W/(m.k)
- **Water Absorption (7 days):** 0.24kg/m²

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**Pentens SPU-1000 Technical Data**

<table>
<thead>
<tr>
<th>Elongation</th>
<th>Tensile Strength</th>
<th>Tear Strength</th>
<th>Solid</th>
<th>Pull-off Adhesive Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;500</td>
<td>&gt;150</td>
<td>&gt;70</td>
<td>100%</td>
<td>&gt;20</td>
</tr>
</tbody>
</table>

---

**CHILLED TANK SYSTEM**

冷却池
DOMESTIC TANK SYSTEM

Pentens SPU-1000 Advantages:
- Low VOC.
- Environmentally friendly.
- High elasticity.
- Strong and tough, extremely high mechanical properties.
- Chemical resistance - very good resistance for wide range of industrial chemical.
- Hard wearing.
- Outstanding impact resistance.
- Non-skidded.
- Excellent bond strength to properly prepared substrates.
- No abnormality even submerges in water for a long time.
- Fast set return to service in minutes (Often second).
- Non-toxic.

Tank liners are one of the most critical components of a water tank. Hence, ensure your water remains fresh, taste-free and completely safe from any contaminants. PENTENS SPU-1000 Spray Polyurea is ideally use as protective coating that is sprayed on much like paint. PENTENS SPU-1000 can provide durable watertight and airtight protection. By forming a permanent bond with the surface of the bed, the lining prohibits rust and corrosion as well as insulating against movement.

Domestic Tank Waterproofing Application

<table>
<thead>
<tr>
<th>Primer</th>
<th>1st Coat</th>
<th>2nd Coat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentens E-10</td>
<td>Pentens SPU-1000</td>
<td>Pentens SPU-1000</td>
</tr>
<tr>
<td>Pentens WP Primer T-007</td>
<td>Pentens T-305</td>
<td>Pentens T-305</td>
</tr>
</tbody>
</table>

Pentens SPU-1000 Green Test Data

Heavy Metals:
A. Cadmium (d) Not Detected
B. Lead (Pb) Not Detected
C. Total Chromium (Cr) Not Detected
D. Mercury (Hg) Not Detected

Volatile Organic Compounds (ISO 11890-2) (g/L) 1.0

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

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

Epichlorohydin (ISO 11890-2) (%) Not Detected

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

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

Flash Point (ASTM D3828-07a) (°C) >61

Pentens SPU-1000 Technical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elongation (% ASTM D412-06a)</td>
<td>&gt;500</td>
</tr>
<tr>
<td>Tensile Strength (kgf/cm² ASTM D 412-06a)</td>
<td>&gt;150</td>
</tr>
<tr>
<td>Tear Strength (kgf/cm) ASTM D-412</td>
<td>&gt;70</td>
</tr>
<tr>
<td>Solid (kgf/cm²) ASTM D410</td>
<td>100%</td>
</tr>
<tr>
<td>Pull-off Adhesive Strength (kgf/cm²) ASTM D4541</td>
<td>&gt;20</td>
</tr>
<tr>
<td>Formaldehyde (High Performance Liquid Chromatography) (%)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>Alkyl Phenol Ethoxylate (LCMS-MS) (%)</td>
<td>Not Detected</td>
</tr>
<tr>
<td>Flash Point (ASTM D3828-07a) (°C)</td>
<td>&gt;61</td>
</tr>
</tbody>
</table>

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