ESC VINYL
SHEET PILES
2020 Edition

Flood Control | Water Control | Marine Structures | Containment & Cutoff Systems

www.escpvcsheetpiling.com
ESC Vinyl Sheet Piles also known as PVC Sheet Piles are a modern alternative for your project. They offer a lower cost than steel, wood or concrete alternatives. The ESC Vinyl Sheet Pile is a strong, light-weight, UV and impact resistant product. The product is inert does not rust, corrode or crack. The ESC Vinyl Sheet Pile retains its structural integrity for decades.

**APPLICATIONS**

**Flood Control**
ESC Vinyl PVC Sheet Piles can be utilized for flood protection structures such as Flood Walls or Levees, Stabilization of Dams, Protection of Piping.

**Water Control**
ESC Vinyl PVC Sheet Piles can be utilized for water control structures that function by altering the flow of water in a pond, drainage channel or stream.

**Marine Structures**
ESC Vinyl PVC Sheet Piles provide an excellent option for a long lasting seawall due to their superior corrosion resistance, aesthetic finish and lightweight profile for easy handling and installation.

**Containment & Cutoff Systems**
ESC Vinyl Sheet Piles are frequently the optimal solution for fluid containment projects as they are made of an inert material that can exhibit superior chemical resistance and water corrosion resistance. The interlocks of the sheet pile can be coextruded with a sealing membrane that further improves cut-off performance. Alternatively, a hydrophilic sealant can be applied for swelling in contact with water.

**ADVANTAGES**

- **50+ year design life** - Due to its superior corrosion resistance, ESC Vinyl Sheet Piles can be installed with confidence in their structural integrity and appearance even after 50 years
- **Cost Efficiency** - both from installation and long term cost savings due to superior corrosion resistance and lower price per unit metre material
- **UV Resistance** - The PVC material is engineered with special compounds for resistance to harmful ultraviolet rays
- **No toxic coatings** - No coatings are required, which may be detrimental to the environment
- **Not Affected by Marine Borers** - Small mollusks or crustaceans in the ocean can cause devastating effects over a period of time to traditional timber piling. Vinyl Sheet Piling offers an attractive alternative that is unaffected by these organisms.
- **Easy Installation** - Compared to steel sheet piles, vinyl sheet piles can be up to 40 times lighter per square meter making it much easier to handle. Driving can also be completed under certain conditions by pressing down with an excavator or a impact vibrohammer.

**INSTALLATION GUIDELINES**

Please refer to our informative Installation Guidelines manual which can be download from the ESC website for detailed and easy to understand descriptions for safe and effective vinyl sheet pile installation.
COLD ROLLED SHEET PILES

<table>
<thead>
<tr>
<th>Width (w)</th>
<th>Height (h)</th>
<th>Thickness (t)</th>
<th>Weight Per Pile (kg/m)</th>
<th>Weight Per Wall (kg/m²)</th>
<th>Elastic Section Modulus (cm⁴/m)</th>
<th>Moment of Inertia (cm⁴/m)</th>
<th>Allowable Bending Moment (kNm/m)</th>
<th>Maximum Bending Moment (kNm/m)</th>
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**PROFILE RANGE**

- **ESC-VU25**, **ESC-VU40** & **ESC VU610-9.0**
- **ESC-VZ437-10.5**
- **ESC-VZ555**
- **ESC-VZ580**

**TEST STANDARDS**

- **Density**
  - ASTM: ISO 1183-3
  - ISO: 1400-1480 kg/m³
- **Flexural Strength**
  - ASTM D790
  - ISO 178: 66 MPa
- **Shore Durometer**
  - ISO 868: 75 Shore D
- **Modulus of Elasticity**
  - ASTM D638
  - ISO 178/527-2: 2.62 GPa
- **Tensile Strength**
  - ASTM D638: 44 MPa
- **Izod Impact Strength**
  - ASTM D256: 9 kJ/m²
- **Charpy Impact Strength**
  - ISO 179-1: 30 kJ/m²
- **Vicat Softening Temp.**
  - ASTM D648: 77 °C

**COMPARISON TO OTHER MATERIALS**

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<th>Vinyl (PVC)</th>
<th>Steel</th>
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<td>Medium</td>
<td>Low</td>
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<tr>
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<td>Low</td>
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<td>No</td>
<td>No</td>
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<td>Difficult</td>
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**PROFILE RANGE**

- **ESC-VU25**: G2
  - Type: G2
  - Length: 288 mm
  - Length 1: 258 mm
  - Height: 85 mm
  - Thickness: 6 mm
  - Tensile Strength: 40 MPa
  - Bending Strength: 290 MPa

- **JUNCTION/CORNER CONNECTION**
  - Type: TA 75506
  - Type: TC 106686
  - Type: TC 84608
  - Type: TC 947010N
  - Type: TC 120788
  - Type: TC 1348810
COLOUR OPTIONS

GREY (STANDARD)  OLIVE GREEN OR BROWN  ANY COLOUR (SUBJECT TO MINIMUM ORDER QUANTITY)

ACCESSORIES

✓ Sheet Pile Cap  ✓ Bumper Fender
✓ Ground Anchor  ✓ Installation Mandrel
✓ Tie Rods  ✓ Driving Cap
✓ Waling Channels/Beams  ✓ Driving Guide

PHOTOS
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