



An Affiliate Of:



[www.escpvcsheetpiling.com](http://www.escpvcsheetpiling.com)

# ESC VINYL SHEET PILES

2020 Edition

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



DOWNLOAD OUR  
APP 'ESC GROUP'

# ESC VINYL SHEET PILES

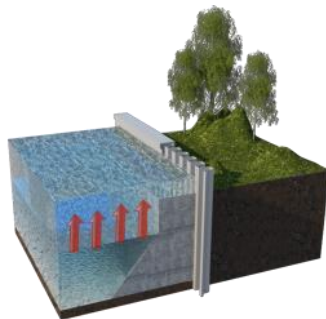
## INTRODUCTION

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

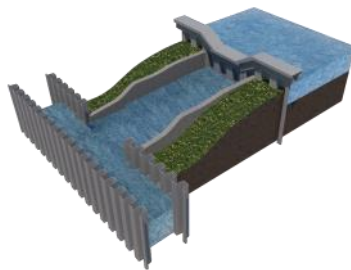
### Flood Control

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



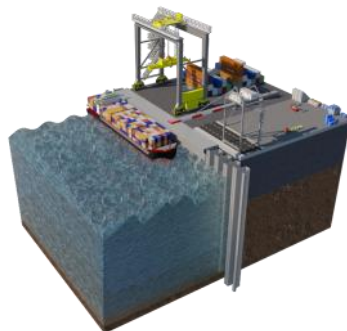
### Water Control

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.



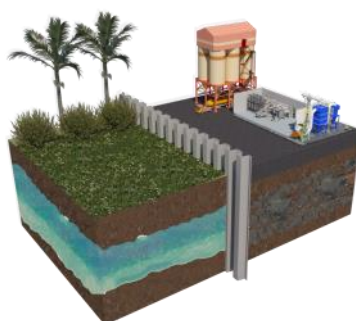
### Marine Structures

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.

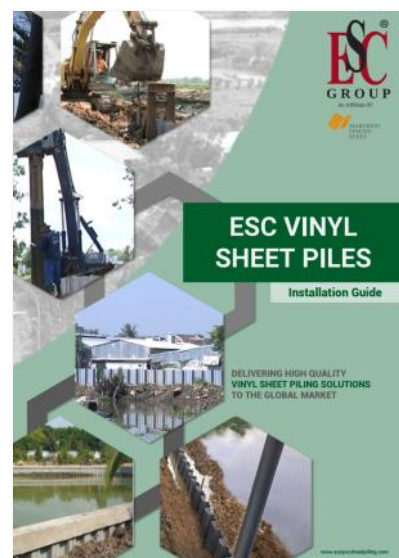


## ADVANTAGES

- ✓ **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.



## COMPARISON TO OTHER MATERIALS

|                                                 | Vinyl (PVC) | Steel | Concrete   | Wood     |
|-------------------------------------------------|-------------|-------|------------|----------|
| Cost                                            | Low         | High  | Medium     | Low      |
| Weight                                          | Light       | Heavy | Very Heavy | Medium   |
| Resistance to Corrosion                         | High        | Low   | N/A        | N/A      |
| Resistance to Chemicals & Sea Water Environment | High        | Low   | High       | Low      |
| Resistance to Cracking & Spalling               | High        | High  | Medium     | N/A      |
| Environmentally Friendly                        | Yes         | Yes   | No         | No       |
| Aesthetics                                      | High        | Low   | Medium     | Medium   |
| Installation                                    | Easy*       | Easy  | Difficult  | Moderate |
| Design Flexibility                              | High        | High  | Moderate   | High     |

## TEST STANDARDS

|                        | ASTM      | ISO           | Min. Value/Range           |
|------------------------|-----------|---------------|----------------------------|
| Density                |           | ISO 1183-3    | 1400-1480kg/m <sup>3</sup> |
| Flexural Strength      | ASTM D790 | ISO 178       | 66MPa                      |
| Shore Durometer        |           | ISO 868       | 75 Shore D                 |
| Modulus of Elasticity  | ASTM D638 | ISO 178/527-2 | 2.62GPa                    |
| Tensile Strength       | ASTM D638 |               | 44MPa                      |
| Izod Impact Strength   | ASTM D256 |               | 9kJ/m <sup>2</sup>         |
| Charpy Impact Strength |           | ISO 179-1     | 30kJ/m <sup>2</sup>        |
| Vicat Softening Temp.  | ASTM D648 | ISO 306       | 77°C                       |

## PROFILE RANGE



| Section        | Width<br>(w)<br>mm | Height<br>(h)<br>mm | Thickness<br>(t)<br>mm | Weight<br>Per Pile<br>kg/m | Weight<br>Per Wall<br>kg/m <sup>2</sup> | Elastic<br>Section<br>Modulus<br>cm <sup>3</sup> /m | Moment of<br>Inertia<br>cm <sup>4</sup> /m | Allowable<br>Bending<br>Moment<br>kNm/m | Maximum<br>Bending<br>Moment<br>kNm/m |
|----------------|--------------------|---------------------|------------------------|----------------------------|-----------------------------------------|-----------------------------------------------------|--------------------------------------------|-----------------------------------------|---------------------------------------|
| ESC-VU25       | 500                | 160                 | 6.0                    | 7.2                        | 14.4                                    | 502                                                 | 4,013                                      | 10.3                                    | 20.6                                  |
| ESC-VU40       | 600                | 230                 | 7.5                    | 11.1                       | 18.5                                    | 920                                                 | 10,574                                     | 18.8                                    | 37.6                                  |
| ESC-VZ437-10.5 | 437                | 254                 | 10.5                   | 11.6                       | 26.5                                    | 1,480                                               | 19,300                                     | 32.6                                    | 65.1                                  |
| ESC-VU610-9.0  | 610                | 230                 | 9.0                    | 13.2                       | 21.6                                    | 1,086                                               | 12,478                                     | 23.9                                    | 47.8                                  |
| ESC-VU695-8    | 695                | 180                 | 8.0                    | 14.6                       | 20.9                                    | 717                                                 | 6,961                                      | 15.1                                    | 30.1                                  |
| ESC-VU695-9    | 695                | 180                 | 9.0                    | 16.5                       | 23.7                                    | 792                                                 | 7,740                                      | 16.6                                    | 33.3                                  |
| ESC-VU695-11   | 695                | 180                 | 11.0                   | 19.2                       | 27.6                                    | 932                                                 | 8,863                                      | 19.6                                    | 39.1                                  |
| ESC-VU705-7.5  | 705                | 180                 | 7.5                    | 12.4                       | 17.6                                    | 682                                                 | 6,420                                      | 13.6                                    | 34.1                                  |
| ESC-VU740-6    | 740                | 180                 | 6.0                    | 11.1                       | 15.0                                    | 548                                                 | 5,465                                      | 11.5                                    | 23.0                                  |
| ESC-VZ565-9.0  | 565                | 245                 | 9.0                    | 15.3                       | 27.1                                    | 1,042                                               | 12,768                                     | 22.9                                    | 45.8                                  |
| ESC-VZ580-7.0  | 290                | 240                 | 7.0                    | 6.1                        | 21.0                                    | 1,228                                               | 15,429                                     | 27.0                                    | 54.0                                  |
| ESC-VZ580-9.0  | 290                | 240                 | 9.0                    | 6.5                        | 22.4                                    | 1,462                                               | 18,739                                     | 32.2                                    | 64.3                                  |
| ESC-VZ580-11.0 | 290                | 240                 | 11.0                   | 7.9                        | 27.2                                    | 1,711                                               | 21,851                                     | 37.6                                    | 75.3                                  |

## PILE CAP



|                  |     |     |
|------------------|-----|-----|
| Type             | G2  |     |
| Length           | mm  | 288 |
| Length 1         | mm  | 258 |
| Height           | mm  | 85  |
| Thickness        | mm  | 6   |
| Tensile Strength | MPa | 40  |
| Bending Strength | MPa | 290 |

## JUNCTION/CORNER CONNECTION



TA 75\*50\*6

TA 84\*60\*8

TA 94\*70\*10N



TC 106\*68\*6

TC 120\*78\*8

TC 134\*88\*10

## COLOUR OPTIONS



GREY (STANDARD)



OLIVE GREEN OR BROWN



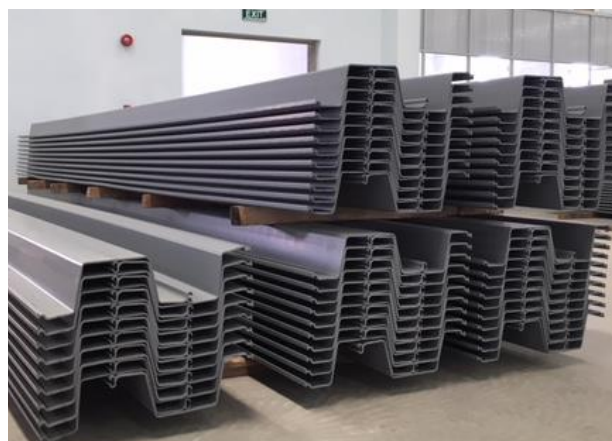
ANY COLOUR (SUBJECT TO  
MINIMUM ORDER QUANTITY)

## ACCESSORIES

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



## PHOTOS





# ESC GLOBAL CONTACT LIST

## CONTACT DETAILS

### Australia, New Zealand & PNG

#### ESC Asia Limited

**A** 12/F Unit 19, Shatin Galleria, 18-24  
Shan Mei Street, Fo Tan, Shatin,  
New Territories, Hong Kong  
**E** brucecolson@escpile.com  
**T** +852 3956 1868  
**W** www.escpile.com

### Argentina, Paraguay & Uruguay

#### Cimtronic Design & Engineering

**A** Vedia 144, 5th Floor, Office 2  
(C1429EIB) Nuñez CABA, Argentina  
**E** informes@cimtronic.com.ar  
**E** fgallo@cimtronic.com.ar  
**T** +55 (31) 99976 4714  
**W** www.escpile.com.br

### Brazil

#### ESC Brazil

**A** Sao Paulo, SP, Brazil  
**E** info@escpile.com.br  
**T** +55-11-3170-8598  
**W** www.escpile.com.br

### China

#### ESC Trading (Shanghai) Co., Ltd.

**A** Rm 02, 5/F, No. 16, Gopher  
Qibao T2 Building, Lane 399,  
Xinlong Rd., Minhang District,  
Shanghai, China  
**E** vincenthuang@escpilechina.com  
**E** brucecolson@escpilechina.com  
**T** +86 21 3126 3501  
**T** +86 21 3126 502

### Indonesia

#### PT ESC Steel Indonesia

**A** Graha Mustika Ratu, 5th Floor  
#505, Jln. Jend Gatot Subroto  
Kav. 74-75, Jakarta 12870  
**E** zulfan@escpile.com  
**E** chanhonkit@escpile.com  
**T** +62 811 980 376  
**T** +62 821 247 99 468  
**W** www.escsteel.co.id

### India

#### ESC India

**A** E/42, Rajdeep CHS, Gokhale  
Road, Naupada, Thane (W) :  
400602, India  
**E** kiranpujari@escpile.com  
**T** +91 9920 160 019  
**W** www.escpile.com

### Malaysia, South East Asia & South Asia

#### ESC Steel Engineering Sdn Bhd

**A** F-1-2 Second Floor, Block F Suite 5  
Setia Walk, Persiaran Wawasan,  
Pusat Bandar Puchong  
47160 Puchong, Selangor, Malaysia  
**E** chanhonkit@escpile.com  
**T** (Malaysia) +6012 428 5759

### Mexico, Central & South America

#### Acerlum ESC SAPI de CV

**A** Loma de la Cañada No. 4,  
Loma, Querétaro, México  
CP 76060  
**E** info@acerlum-esc.com  
**T** +52 442 4711 500  
**W** www.acerlum-esc.com

### Middle East & Africa

#### ESC Middle East

**A** P.O. Box 131355, Industrial Area  
City of Abu Dhabi, Mussafah,  
Abu Dhabi, UAE  
**E** escuae@escpileuae.com  
**E** kevinashdown@escpileuae.com  
**T** +971 2550 6188  
**F** +971 2550 6112  
**W** www.escpileuae.com

### Netherlands

#### Europile B.V.

**A** Dam Bustersstraat 7 NL  
4651 Sj Steenbergen  
Netherlands  
**E** info@europile.nl  
**E** esceuro@escpile.com  
**T** +31 167 534 747  
**F** +31 167 534 850  
**W** www.europile.com

### Nigeria

#### ESC Nigeria Ltd

**A** No.72, Apt 5, Lome Crescent,  
Wuse Zone 7, Abuja,  
Nigeria  
**E** escnigeria@escpile.com  
**E** bulkplus@gmail.com  
**T** +234 7050 8888 22  
**F** +234 8067 3905 66

### Philippines

#### ESC Steel Philippines, Inc.

**A** 12V 12/F Cyber One Building,  
11 Eastwood Avenue,  
Eastwood City Cyberpark,  
Bagumbayan, Quezon City,  
Philippines  
**E** manila@escsteelphil.com  
**E** cebu@escsteelphil.com  
**T** +632 8526 8839  
**M** +63 917 202 7798  
**W** www.escsteelphil.com

### Russia

#### ESC-Beregstal Jsc

**A** 20 Ulitsa Lotsmanskaya  
St Petersburg 190121  
Russian Federation  
**E** escrussia@escpile.com  
**E** vovauliev@gmail.com  
**T** +7812 495 0806  
**F** +7812 325 9357

### Ukraine

#### Mageba Ukraine LLC

**A** Gagarina Str.55, off 466  
Cherkasy, 18000  
Ukraine  
**E** escukraine@escpile.com  
**E** oleg@escpile.com  
**T** +38 472 503661  
**F** +38 472 503662

### United States & Canada

#### ESC Steel LLC

**Contact:** Bruce Colson  
**A** (North Carolina) 18805 W Catawba  
Ave, Suite #207, Cornelius, 28031,  
North Carolina, USA  
**E** bruce@escsteel.com  
**T** +1 (704) 654 0321  
**T** +1 (980) 689 4388  
**T** (Canada) +1 (604) 235 1911  
**F** (Canada) +1 (415) 500 9825  
**W** www.escsteel.com

#### ESC Steel LLC

**A** (Texas) Market Street 9595  
Six Pines Dr. Suite 8210, The  
Woodlands, Texas 77380 USA  
**E** info@escsteel.com  
**E** kevin@escsteel.com  
**T** +1 (281) 205 7261

### United Kingdom & Ireland

#### ESC Steel LLC

**Contact:** Bruce Colson  
**A** 18805 W Catawba Ave,  
Suite #207, Cornelius, 28031,  
North Carolina, USA  
**E** bruce@escsteel.com  
**T** +1 (704) 654 0321  
**T** +1 (980) 689 4388  
**W** www.escsteel.com

#### Disclaimer

The information provided within this Catalogue is for general information purposes only, without any warranty. ESC shall not be held responsible for any errors, omissions or misuse of any of the information provided. ESC disclaims any and all liability resulting from the ability or inability to use the information within this document. Anyone using the information contained does so at their own risk. ESC shall not be held liable for any damages which includes any financial losses or incidental or consequential damages arising from the use of this information. The product range contained is liable to change without notice.



An Affiliate Of:



MARUBENI  
ITOCHU  
STEEL

## ESC Global Headquarters

**A** 12/F Unit 19, Shatin Galleria  
18-24 Shan Mei Street  
Fo Tan, Sha Tin  
New Territories, Hong Kong

**E** [escglobal@escpile.com](mailto:escglobal@escpile.com)

**T** +852 3956 1868

**F** +852 3706 5744



/escglobalgroup



@escpilesteel



/company/esc-global-group



ESC Group



[www.escpvcsheetpiling.com](http://www.escpvcsheetpiling.com)



**DOWNLOAD  
THE ESC GROUP APP**

