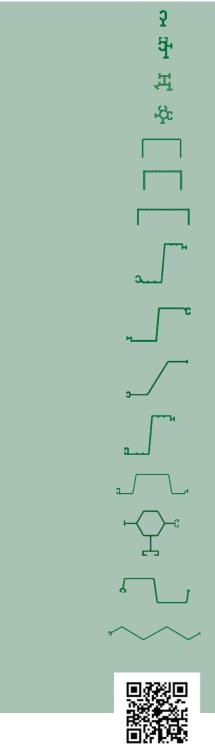
ESC VINYL SHEET PILES CATALOG





2023 EDITION







About ESC

Since the inception of ESC occurred in 1986, ESC have been looking to innovate piling solutions. The move into vinyl sheet piling is part of ESC's evolution to ensure the new demand for environmentally friendly systems is met.

ESC Group continues to achieve significant milestones as it goes beyond 34 years since its first sheet pile was driven at Magnetic Island, Australia in 1986.

Expansion into Asia happened in 1991 (firstly Singapore then Malaysia and onto China and Philippines) and set up in the Middle East in 2004. ESC arrived in the USA in 2012.

Now located in twenty (20) countries and counting, ESC has so far established manufacturing and engineering offices in different regions throughout Asia, the Middle East and North America. This growth through project awards and market footprint spearheaded ESC's recognition and popularity in the global market helping it become one of the foremost trusted product and service providers with delivery of significant projects all over the world.

ESC, over the years, has evolved into an internationally certified organization with full capacity in Engineering and Design, Project Management, Research and Development, Manufacturing, Supply, and Construction.

Heading up operations in the UAE is the ESC Group (Middle East) which is an integral part of the Group with locations in both Abu Dhabi and Dubai. The activities for the entire Middle East are coordinated from these offices along with those in Kingdom of Saudi Arabia, Oman, Yemen, Qatar, Kuwait, Bahrain, Jordan, Iraq, and Lebanon.





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ESC VINYL SHEET PILES

Vinyl Sheet Piles or PVC Sheet Piles are an effective alternative to steel sheet piling for bulkheads, seawalls and cutoff walls. They are also superior to alternative materials like concrete and wood. The main advantage of vinyl sheet piles is the superior corrosion resistance when exposed to seawater, where no oxidation occurs. Vinyl sheet piles are also highly resistant to marine borers which make them superior to wooden solutions.

Browse through ESC's new range of sheet piles, manufactured in facilities in Europe in partnership with the Pietrucha Group. Soon to be manufactured in the USA. Vinyl Sheet Piling also known as Synthetic Sheet Piling, Plastic Sheet Piles, PVC Sheet Piles are becoming increasingly popular due to;

- 50+ year design life Due to their superior corrosion resistance, ESC Vinyl Sheet Piles can be used 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 of 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 100 times lighter per square foot
 making it much easier to handle. Driving can also be completed under certain conditions by pressing down with an
 excavator or a impact vibrohammer.
- · Carbon Emissions Significantly lower than steel solutions.



Typical Applications

ESC Vinyl PVC Sheet Piles can be utilized for structures such as Embankments, Flood Walls or Levees, Stabilization of Dams, Protection of Piping and Ground Water Cut-off Walls.



CONTAINMENT & CUTOFF SYSTEMS



WATER CONTROL



MARINE STRUCTURES



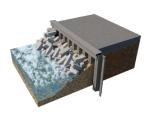
FLOOD CONTROL



RETAINING WALL



EMBANKMENT WORKS ROAD CONSTRUCTION



REVETMENT WORKS



EROSION CONTROL

Cutoff & Containment Barriers

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 co-extruded with a sealing membrane that further improves cut-off performance. Alternatively, a hydrophilic sealant can be applied for swelling in contact with water.

- Groundwater cut-off
- Chemical Containment
- Fluid Seepage Barriers
- Protection of Foundation Structures

Marine Structures

ESC Vinyl 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.

- Marine Bulkheads & Seawalls
- Tide Walls
- Breakwaters
- Wave Breaks
- Jetty Structures
- Groins
- Scour Protection and Erosion Control
- Retaining Walls

Flood Control

ESC Vinyl Sheet Piles can be utilized for flood protection structures such as:

- Flood Walls / Flood Levee
- Stabilization of Dams
- Protection of Piping

Water Control Systems

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

- Baffle Walls for Water or Waste Water Flow Control
- River Weirs
- Channel Linings for Agricultural Applications
- Pond Linings
- River Diversion
- Mining Drainage Systems

ESC VINYL SHEET PILING WITH GASKETS

Geotechnical piling for special purposes

The tightness of locks in the vinyl sheet piling walls depends on the following factors:

- · The shape of a lock, which can elongate or reduce the distance travelled by water.
- The width of a single vinyl sheet pile. The wider the section, the lower the number of locks per unit
 of length of the wall, e.g. by replacing 300 mm width piles with 606 mm piles, the leaking factor of
 the wall will be reduced by the factor of two.
- The PVC material is engineered with special compounds for resistance to harmful ultraviolet rays.
- The hydrostatic pressure affecting the wall. The higher the pressure, the lower the possibility of clogging of locks.
- The stress levels at the locks' contact area. The higher the tightness and the pressure on the locks'
 wall surfaces, the smaller the occurring gaps, therefore, rendering the flow of water through the
 lock limited.



Some strategic investment projects require a guarantee of full water-tightness of the vinyl sheet piling constructions. In response to the needs expressed by customers, a specialized tightening solution based on the use of gaskets was specifically designed for this purpose.

The gaskets are made out of soft PVC and co-extruded into the locks during the manufacturing process. Their shape is determined by the type of the vinyl sheet piles.





Comparison to Other Materials

Material Standards

TYPE OF PROFILE	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

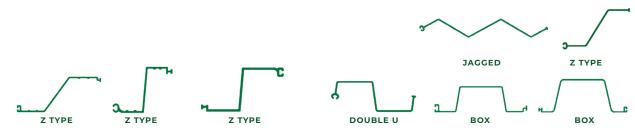
	ASTM	ISO	MIN. VALUE/RANGE
Density		ISO 1183-3	1377-1474 kg/m³
Flexural Strength	ASTM D790	ISO 178	66 mPa
Shore Durometer		ISO 868	75 Shore D
Modulus of Elasticity	ASTM D638	ISO 178/527-2	2.6 GPa
Tensile Strength	ASTM D638		44 mPa
Izod Impact Strength	ASTM D256		8.7 kJ/m²
Charpy Impact Strength		ISO 179-1	29 kJ/m²
Vicat Softening Temp.	ASTM D648	ISO 306	76°C

Installation Guidelines

Please refer to our Installation Guidelines manual which can be downloaded from our website for detailed and easy to understand information for safe and effective vinyl sheet pile installation.



Profile Range



Section	Width	Height	Thickness	Cross	Section	Moment	Allowable	Ultimate	Ultimate	Impact	We	ight	Profile
	(W)	(H)	(T)	Section Area	Modulus	of Inertia	Moment	Moment	Stiffness	Strength Charpy Test	Per Pile	Per Wall	
	mm	mm	mm	cm ²	cm³/m	cm ⁴ /m	kNm/m	kNm/m	kNm²/m	kJ/m²	kg/m	kg/m²	
ESC-GW600-5.5	608	88	5.5	41.1	87	385	1.9	3.8	9.9	≥30	5.9	9.7	Jagged
ESC-GW600-6.0*	608	88.5	6	44.5	94	417	2.1	4.1	10.8	≥30	6.4	10.5	Jagged
ESC-GW270-3.5*	270	150	3.5	15.5	254	2327	5.6	11.2	60.5	≥30	2.2	8.3	Z
ESC-GW300-5.5	300	115	5.5	29.7	320	1842	7	14.1	47.9	≥30	4.3	14.3	Double U
ESC-GW300-6.0*	300	115	6	32	345	1988	7.6	15.2	51.7	≥30	4.6	15.3	Double U
ESC-GW460-5.5	460	130	5.5	42.9	360	2527	7.9	15.8	65.7	≥30	6.2	13.4	Box
ESC-GW270-5.5	270	155.5	5.5	22.3	369	3266	8.1	16.3	84.9	≥30	3.2	11.9	Z
ESC-GW270-6.0*	270	156	6	23.9	398	3499	8.8	17.5	91	≥30	3.4	12.8	Z
ESC-GW610-6.4	606	180	6.4	62.6	613	5514	13.5	27	143.4	≥30	9.6	14.9	Box
ESC-GW610-7.2	606	200	7.2	73.1	774	7743	17	34.1	201.3	≥30	10.7	17.4	Box
ESC-GW610-6.0*	606	230	6	63.9	775	8915	17	34.1	231.8	≥30	9.2	15.2	Box
ESC-GW565-9.0	565	245	9	72.9	1042	12768	22,9	45.8	332	≥30	10.5	18.6	Z
ESC-GW610-9.0	606	230	9	95.3	1109	12758	24.4	48.8	331.7	≥30	13.6	22.6	Box
ESC-GW580-7.0	290	240	7	47.6	1228	15429	27	54	401.2	≥30	6.9	23.6	Z
ESC-GW580-9.0	290	240	9	59.8	1462	18739	32.2	64.3	487.2	≥30	8.6	29.7	Z
ESC-GW458-10.4	458	254	10.4	87.7	1542	20718	33.9	67.8	538.7	≥30	12.6	27.6	Z
ESC-GW350-9.0	350	250	9	71.4	1685	21203	37.1	74.2	551.3	≥30	10.3	29.4	Z
ESC-GW580-11.0	290	240	11	71.6	1711	21851	37.6	75.3	568.1	≥30	10.3	35.5	Z
ESC-GW458-12.0	458	254	12	97.8	1717	22937	37.8	75.5	596.4	≥30	14.1	30.7	Z

All products manufactured to comply with the following Designation: D8427 – 21 Standard Specification for Rigid Poly Vinyl Chloride (PVC) Exterior Profiles Used for Sheet Piling



Section	Width (W)	Height (H)	Thickness (T)	Cross Section Area	Section Modu- lus	Moment of Inertia	Allowable Moment	Ultimate Moment	Ultimate Stiffness	Impact Strength Charpy Test		ight Per Wall	Profile
	mm	mm	mm	cm²	cm³/m	cm⁴/m	kNm/m	kNm/m	kNm²/m	kJ/m²	kg/m	kg/m²	
ESC-GW300-FR	300	115	5.5	29.7	320	1,842	7	14.1	64.5	≥ 30	4.4	14.8	Hybrid Double U
ESC-T-HEX	250	219.5	7.5	59.7	815	12,175	17.9	35.9	316.5	≥ 30	8.6	34.4	Hex
ESC-GW350-FR	350	250	9	71.4	1,685	21,203	37.1	74.2	912	≥ 30	10.7	30.6	Hybrid Z

^{*} By special order, subject to minimum quantity.

Color Options

** Minimum order for profiles in a color other than GREY – 5500 ft² / 550m²



Grey (Standard)



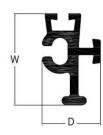
Olive Green or Brown (subject to minimum order quantity)

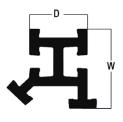
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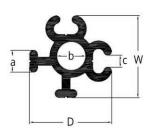
Any color (subject to minimum order quantity)

Corners for Vinyl Sheet Piles









ESC-CORNER 300

ESC-CORNER 580/610

ESC-CORNER 45

ESC-CORNER 300 QUADRUPLE

Corner	Width	Depth	Weight	Tong	ue and G	roove
	(W)	(D)		Α	В	c
	mm	mm	kg/m	mm	mm	mm
ESC-Corner 300	45.0	15.6	0.57	-	-	-
ESC-Corner 580/610	96.5	58.8	2.80	-	-	-
ESC-Corner 45	81.50	76.70	3.20	-	-	-
ESC-Corner 300 Quadruple	57.0	57.0	1.58	15.5	20.0	8.4

Tolerance in accordance with the State technical assessment.

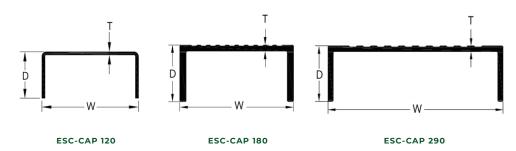
ESC custom manufacture corners in varying shapes/angles for your project requirements.

Application for Type of Profile

TYPE OF PROFILE	CORNER 300	CORNER 580/610	CORNER 45	QUADRUPLE
ESC-GW270	Х			X
ESC-GW300	Χ*			X
ESC-GW600	X			X
ESC-GW460	X			X
ESC-GW565		X	X	
ESC-GW610		Х	X	
ESC-GW580		Х	X	
ESC-GW458		Х	X	
ESC-GW350FR		Х	Х	

^{*} Recommended

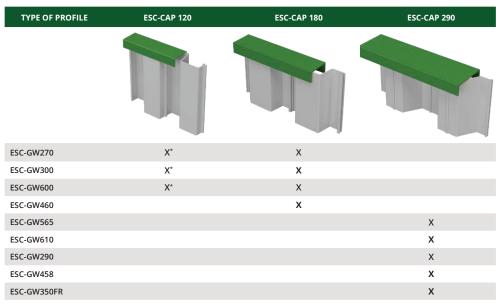
Vinyl Sheet Pile Caps



	Width (W)	Depth (D)	Thickness (T)	Weight
	mm	mm	mm	kg/m
ESC-CAP 120	127	60	2.7	1.15
ESC-CAP 180	180	90	9	3.95
ESC-CAP 290	290	90	10	5.50

Tolerance in accordance with the State technical assessment.

Application for Type of Profile



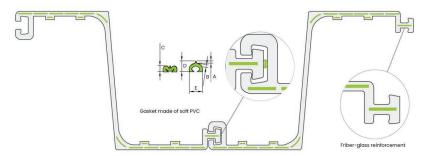
^{*} Recommended

Accessories

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

Superlock ESC-GW300-FR and ESC-GW350-FR

SuperLock system is the new generation of composite sheet piling made of PVC reinforced with fiber glass. The new Superlock composite gives the best value for your money. SuperLock retains all the advantages of vinyl sheet piling combined with reinforced strength and stiffness allowing for a broader scope of applications, which had traditionally been reserved to steel sheet piling.



An innovative composition of PVC and fiber-glass sealed together with a thermo-plastic matrix

Composite material with significantly higher technical parameters than PVC and much broader scope of application.

Strength and stiffness parameters comparable with light steel piling with all the advantages of PVC sheet piling.

SHEET PILE TYPE	STEEL	PULTRUDED	PVC	SUPERLOCK
hickness (mm)	3 to 10	5 to 11	5 to 12	9
ction depth (mm)	90 to 400 & more	140 to 400	30 to 400	250
ight of sqm (kg/m²)	30 to 100 & more	10 to 40	5 to 40	30
ce for sqft (sqm)	\$\$ - \$\$\$\$	\$\$\$ - \$\$\$\$\$	\$ - \$\$	\$\$
Max. Stiffness (kNm²/m)	1000 to 100000 & more	250 to 7500	1 to 350	913

^{*} Parameters based on numerical research of theoretical model. For design purposes, please, use parameters included in the current technical specification

SuperLock composite sheet piling is made of PVC reinforced with continuous and consolidated fiber glass inserts using the coextrusion technology. Application of this innovative solution increases both the durability and strength of the profile.

The strength and durability parameters of the SuperLock composite sheet piling are comparable to those of the light steel piling but with the weight and price of the PVC piling.

Note: Gasket is provided on special order and does not come with standard profiles unless specifically ordered.



INSTALLATION

ESC offers design, supply and installation of vinyl sheet piles at the construction site by our technical team. The construction team together with the design engineers are well experienced to handle variable ground conditions to adopt suitable installation techniques and methods. These projects include retaining walls, containment and cutoff systems, water control, revetment works, erosion control and others.

To meet all kinds of piling requirements, ESC have the fleet of necessary equipment and manpower resources and shoring materials for carrying out the construction works in line with ESC's commitment and compliance to the International Standard for Quality Management System (ISO 9001:2015), Environmental Management System (ISO 14001:2015) and the Occupational Health and Safety Management System (ISO 45001:2018), to ensure continuous Client's Satisfaction.

INSTALLATION METHOD

Excavator Compression

In some cases of soft soil, utilising just the bucket of an excavator pressing and hammering against the vinyl sheet pile is sufficient to drive it to design depth. A steel pile head is typically used to protect the pile top and also distribute the excavator pressing load.







PRESSING



HAMMERING

Excavator Mounted Vibrohammer

Suitable vibrohammers for the installation of vinyl sheet piles are typically in the small to medium range. Excavator mounted vibrohammers are an excellent option because of their versatility and the fact that generally the excavator is utilised in other activities prior to and/or after the sheet pile installation such as excavation or soil compaction. The operator has to be mindful of verticality during driving, since unlike the crane, the vibrohammer has to follow the hinge trajectory of the excavator. For tougher soil conditions a mandrel can be used in conjunction with this system-see "Mandrels" section of this installation guide.



Crane Mounted and Leader Guided Vibro Hammer

Crane mounted and leader guided vibro hammer has advantageous over excavation mounted hammer installation as it can efficiently handle much longer pile lengths. The vibro hammer can effectively rest its weight and force directly on top of the pile which results in better verticality. However, the cost of driving is typically higher than the excavator options due to the extra equipment and mobilization cost. It must be note, however that the type of equipment used depends on the soil type. Furthermore, Steel Mandrels which is a special guide steel with the same shape and length of the profile of vinyl sheet piles is recommended to be used for longer length piles or in the case of hard or dense soil which need to be hammered to avoid buckling during installation process.





DROP HAMMER

A drop hammer is a mechanical simple driving method for driving vinyl sheet piles by lifting and releasing a falling drop hammer weight at low frequency.

WATER JETTING

Water jetting may be used in conjunction with other installation methods where the soil is very compacted or cohesive. A high pressure jet of water (or sometimes air) is expelled from the base of the sheet pile loosening the soil as the sheet pile is driven through.

MANUAL INSTALLATION

For extremely soft soils and low driving depths, simple manual tooling can be used to pitch and hammer down the sheet piles with just a few labourers.

Installation Mandrel

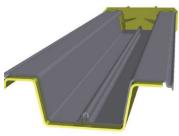
SLEEVE MANDREL

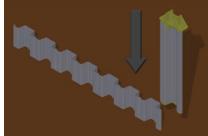
A steel sleeve welded to a steel pile head that fits over the Z pile pair or single box pile. The sheet pile is typically horizontally slid onto the sleeve and clamped on by a screw. Then it is lifted over and driven down. Once the design depth is reached or further penetration is refused, the steel mandrel is withdrawn leaving the vinyl sheet pile in place.

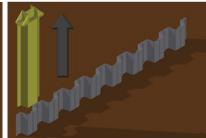
Equipment Required: Vibrohammer (excavator or crane mounted), Crane or Excavator

Suitable for: Slightly more difficult soil conditions where driving the vinyl sheet pile directly is not possible. Also suitable for longer sheet piles with thinner profiles.

Advantages: Can penetrate more difficult soils without damaging the vinyl sheet pile.







Anchoring

Vinyl Sheet Piles can be anchored for applications which have a retaining purpose higher than which a cantilevered sheet pile can resist. These are typically anchored via steel threaded bars that can be tensioned against anchor piles or blocks behind the slip plane of the soil. These anchor piles or blocks are typically made of reinforced concrete, PVC or timber. To effectively transmit the dispersed retained load to the anchor rods and pile/block a waling channel on the sheet pile side is used.

The design engineer typically specifies in the plan drawings how far back and the size and frequency of these anchors. It is important the installer ensures that there is safe access to the anchor attachments at both ends (and possibly in between if there is a turnbuckle in the middle).

ESC also design and supply earth anchors which uses a spade anchor that transfers the tensile forces onto the bearing layer of the soil.

It is very important that the tie backs or earth anchors are situated sufficiently far back from the slip plane or active wedge of the soil. This plane is the natural angle the dirt settles too if unsupported and the anchor must be behind that plane.



SHEET PILING WITH 2 LEVELS OF ANCHORING





SHEET PILE WALL WITH TIEBACKS

Small Retention System EcoLock

Small retention systems - an important element of flood and drought management in forest ecosystems.

The analyses conducted during the past fifty years have clearly shown that more and more regions will suffer from periodical water scarcity. Due to global climate change, unfavorable trends in the existing water balance were diagnosed in many areas, i.e. lowering of the ground water level and the water surface level in reservoirs, disappearance of forest lakes, drying out of the naturally damp forest ecosystems and the progressive degradation of peat soils.

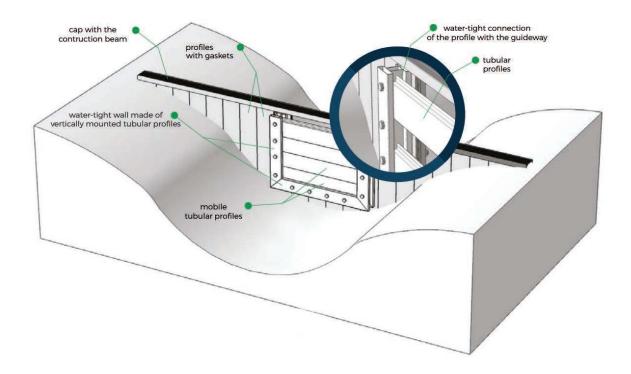
The vinyl small retention sluice gates offered by ESC are an advanced, durable and easy to maintain alternative to the traditional, wooden small retention systems. It is also an environmentally-friendly solution due to the use of recycled PVC construction components, with the possibility of re-processing.



The small retention sluice gates are made from tough polyvinyl chloride, modified with refining agents (e.g. toughness modifiers, UV and thermal stabilizers and mineral filling components). Thanks to the use of this closed-cycle recycling method, vinyl sheet piles are an envionmentally friendly solution. Application of the ISO 9001:2008 standard has enabled ESC to provide and maintain high-quality products.

Five reasons to choose the small retention sluice gates manufactured by Pletrucha ESC.

- Easy to handle and maintain with light-weight mobile elements.
- Do not require maintenance works.
- Fast assembly using light equipment.
- Natural look in harmony with the surroundings.
- Highly resistant to the impact of mechanical, atmospheric and biological factors.



The small retention sluice gate system is made of tubular profiles in the shape of a honeycomb. This profile design guarantees high strength and at the same time lightweight transport and easy assembly in hard access spots. The profiles are connected with locks equipped with valves which guarantee 100% water -tightness of the construction. The smooth surface of the walls may be extruded in the form of a tree ring pattern to perfectly melt with the surrounding environment.

When the water level rises, the PVC tubular profiles assembled diagonally fill in with water. The weight of the water inside the profiles makes the locks fit tightly to create water-resistant sluice.

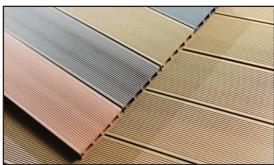
TerraDeck

Stylish ambience that you will enjoy for many years.

EXPERIENCE AND THE HIGHEST QUALITY

Pietrucha and ESC have over 25 years' experience in the manufacturing of building and construction materials. We have developed a unique ShieldFix formula combining specially selected compatibilizer to WPC materials and mineral agents absorbing humidity. ShieldFix significantly increases the resistance of our decking boards to atmospheric conditions.





SELECTED APPLICATIONS

- Swimming pools
- Terraces and porches
- · Bridges, dais and scene floors
- Sun breakers, dividing walls of balconies
- Decorative elements of elevation
- Tables, benches, flowerbeds

TERRADECK: BETTER CHOICE THAN WOOD!

- Higher durability and resistance to pressure.
- Resistance to frost, humidity, fungus, insects and rodents.
- · Safe and inflammable construction material.
- Does not require painting and complicated maintenance.

THE PERFECT CHOICE

Durable and resistant to the atmospheric conditions

- TerraDeck decking boards do not rot, bloat or erode, are resistant to delamination and buckling, keeping their original shape and parameters.
- UV, heat, frost and humidity resistant.
- Maintenance friendly.

User friendly

- Non-slippery surface, both in wet and dry conditions.
- · Easy to clean using standard methods.
- Environmentally friendly, partly manufactured from recycled material, 100% recyclable.
- · Processing similar to wood but without splinters.

The highest quality and a wide range of applications

- TerraDeck is an excellent quality, environmentally friendly wood substitute.
- · Natural look resembling the wood surface and structure.
- Available in a wide range of colours.
- · Solid and aesthetic finish.



ADVANTAGES OF PVC BASED MATERIALS OVER THE PRODUCTS CONTAINING POLYPROPYLENE (PP)!

- Higher resistance to atmospheric conditions.
- In low temperatures, PP boards vitrify and as a result may become fragile and prone to cracking.
- Safer to use. Boards containing PP are more slippery.
- Natural look. TerraDeck looks like wood rather than like paraffin as in the case of PP-based products.

Vinyl Fencing System

Pietrucha ESC is a manufacturer of a wide range of vinyl fencing, an advanced, durable and aesthetic solution with exceptional usage parameters.

Five reasons to choose the vinyl fences:

- No need to paint.
- Resistant to biological damage.
- Resistant to humidity, extreme temperatures and UV radiation.
- Aesthetic, modern look.
- Easy to assemble and maintain.



Vinyl fences are resistant to the impact of atmospheric conditions, including UV radiation, humidity or extreme temperatures. The elements of the system do not corrode as in the case of metal, do not rot as with timber.

TECHNOLOGY

The vinyl fences are made of high quality vinyl polichloride (PVC) reinforced with special components enhancing the durability and resistance to ageing.

Thanks to the continuous monitoring and implementation of strict manufacturing procedures, we guarantee high and consistent quality of our products. An advanced machine park coupled with over 20 years' experience in plastics processing guarantee the highest quality of the products manufactured by Pietrucha ESC.



Photos

















^{*} Special mention to The Pietrucha Group for the permission to publish selected photos from their library in some locations of this catalog.

ESC Product Catalogs

ESC W

You may download all our product catalogs on this https://www.escpiling.com/downloads or request via email: escuae@escpileuae.com. If you are viewing online, you may click on the image below to download.



Trench Safety Catalog

MARINE FENDER CATALOGUE



ESC Capability Statement

GLOBAL









Project Case Study - Book I





ESC Middle East - General Brief



Marine Mooring Bollards Catalog



Project Case Study - Book II



Sheet Pile Installation Manual



Port & Offshore Structures Capability Statement



Project Case Study - Book III

VINYL SHEET PILE INSTALLATION GUIDE

ESC CAPABILITY STATEMENT

MARINE & FOUNDATION PILING CATALOG

SHEET PILE INSTALLATION PROCEDURES

TRENCH SHORING CATALOG

STEEL STRUCTURES CAPABILITIES

MOORING BOLLARDS CATALOG

MARINE FENDERS CATALOG

PORTS & OFFSHORE STRUCTURES

ESC PROJECT CASE STUDIES

COMBINATION WALL **PROJECTS**

STEEL PIPE PILING **PROJECTS**



Marine Fender Catalog

Combination Walls Project



Steel Pipes Projects







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