

## CeTeau Vinyl Sheet Pile (PVC)





CeTeau stands for advanced ground improvement technologies and specialized geosynthetic environmental techniques. With more than 15 years of worldwide experience in numerous projects, CeTeau is ready to execute your project according to the highest expectation. CeTeau manufactures and installs a complete line of geosynthetics; geotextiles, geomembranes, geogrids, High Density Poly Ethylene Liners, Geosynthetic Clay Liners, silt protectors, gabions, vinyl sheet piles and many more solutions.



All these products are approved according the latest standards so they can exceed the lifespan of your projects.

## CeTeau-Vinyl Sheet pile system

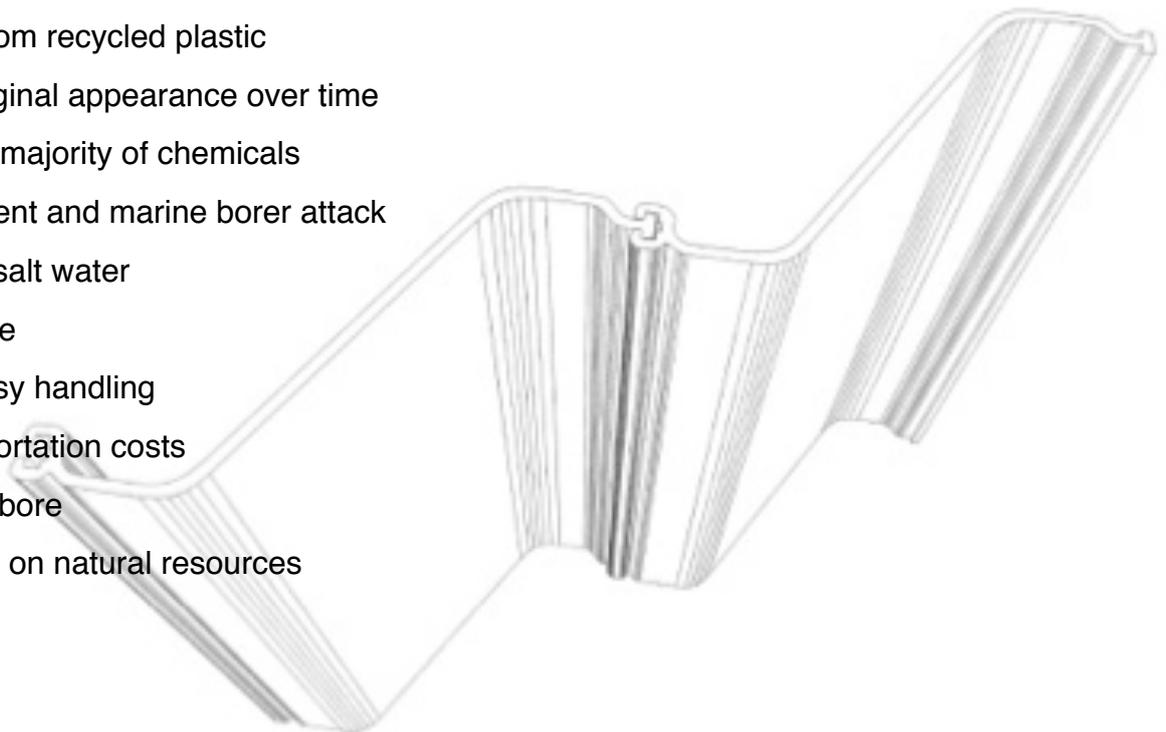
Vinyl sheet piling systems are the new standard with many advantages compared to hard wood, concrete and steel sheet piling. Vinyl sheet piles are made of poly vinyl chloride also known as PVC, a material with excellent resistance to weather influences and it has a long service life. Moreover, the material will not be affected by natural matters occurring in the ground, rodents, and salt or fresh water.

PVC sheet piling has a number of benefits over traditional steel timber or concrete piling: mainly, cost, durability, ease of handling and environmental.



### Benefits

- \* Does not rot or rust
- \* Long service live
- \* Manufactured from recycled plastic
- \* Maintains its original appearance over time
- \* Resistant to the majority of chemicals
- \* Resistant to rodent and marine borer attack
- \* Not affected by salt water
- \* Maintenance free
- \* Light weight, easy handling
- \* Reduced transportation costs
- \* Easy to cut and bore
- \* Reduced impact on natural resources



## Applications

### Cut-off barriers

Vinyl sheet piles can be used as cut-off barrier to isolate contaminated areas from the environment. The lock can be provided with a hydrotite swelling cord to minimize the leakage. Since the sheet piles are supported by soil on both sides, there is minimal horizontal load on the sheets and a profile with a very low strength rate can be used. Another cut-off barrier application is to seal dikes and avoid perforation by rodents. Its chemical resistance provides a long term solution against water penetration and the strength of the sheet piles can increase the stability of the dike.

### Shore protection

Vinyl sheet piles can be used as facing, revetment, bulkhead or flood protection. The sheet piles are used to prevent erosion of the shore line by wave or tidal action. The design should be based on extreme tidal differences. Excessive water pressure behind the wall should be avoided to minimize the load on the sheet piles. Shore protection walls should be anchored if the back pressure of the ground exceeds the maximum load. The system is also an excellent product to stabilize revetment systems. The riprap used to protect the shoreline can be set and washing out of fines is avoided.



### Retaining walls

Retaining walls for all kind off applications can be considered; Trench sheeting, railway embankments, highway applications etc. Behind retaining walls the water level in the ground should be controlled by a drainage system to limit the active load. Especially at retaining walls the expected rate of bending should be taken into account, since the sheet piles are visible over the total retaining height and large deformations are not always acceptable.

### Special applications

Small overflows or dams in rivers can be made with CeTeau vinyl sheet piles, possibly in combination with a valve that controls the water level..

As a secondary retaining wall in combination with a low berm, this creates an environmental solution that has a attractive appearance. Furthermore these environmental banks give animals the possibility to escape from the canal.

## Installation

### Vinyl sheet pile installation

There are a large number of techniques to drive vinyl sheet piles. The system used is largely depending on the circumstances like:

- Sheet pile length
- Soil conditions
- Obstructions
- On shore or off shore
- Water depth

In some situations, particularly when short lengths of Plastic Piling are being installed, it can be inserted into the ground by hand using a maul and Pile Cap. This is often the case in peat land areas, where the ground conditions are more favorable.

When installing longer lengths, or where the ground conditions are more difficult, a Piling Hammer should be used.

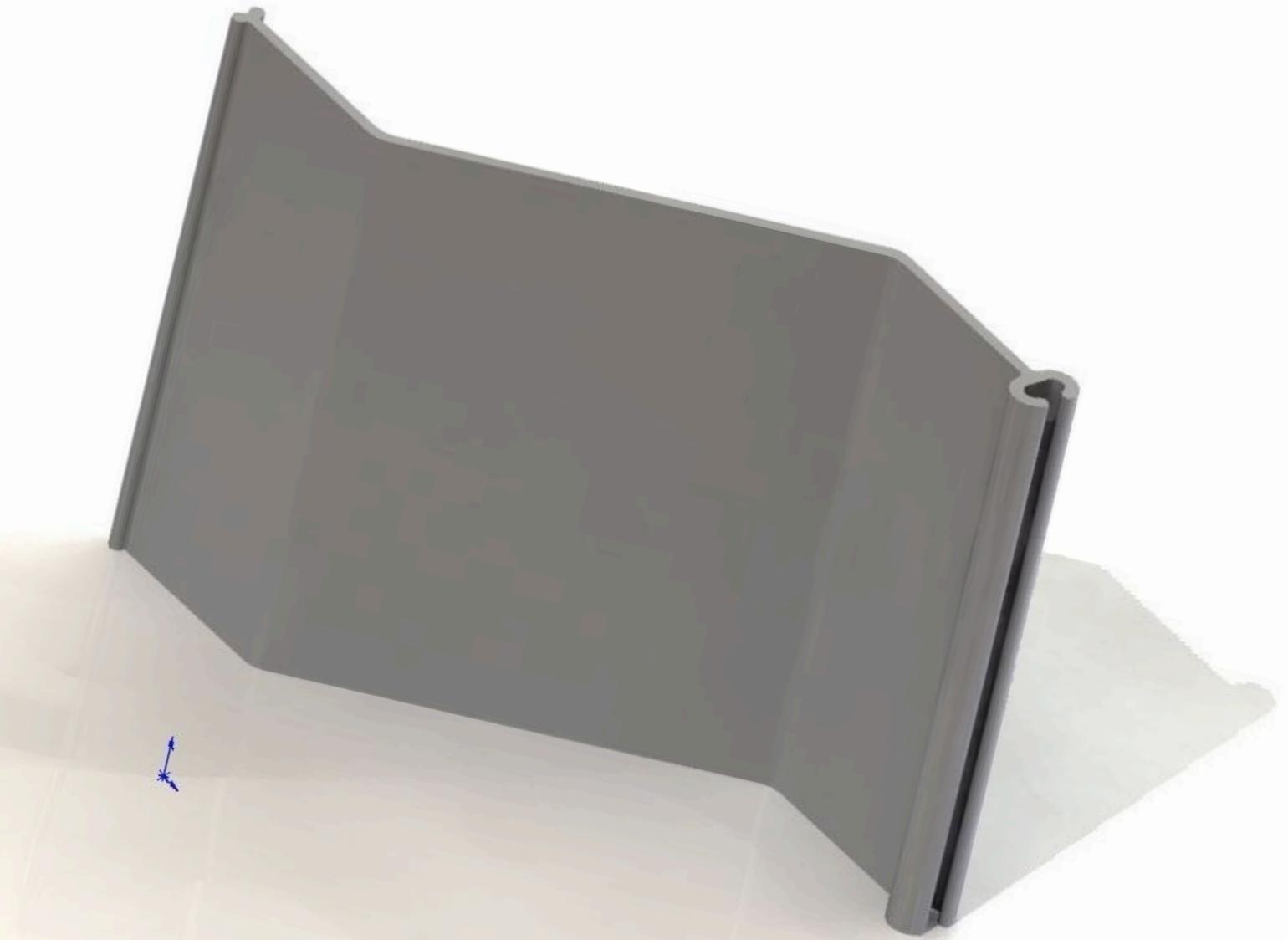
Driving the sheet pile directly can be done with a standard pneumatic hammer or a light vibrator with or without a clamp. This system is only suitable for driving at light conditions and to a limited depth.

For heavy conditions and installation from 4 m up to 8 depth it is advisable to used a steel support sheet pile with exactly the same shape as the PVC profile. With the support harder soil can be penetrated and installation is speeded up because the hammer does not have to be disconnected from the steel guiding sheet pile.

CeTeau can help you choose the most suitable type dependent on the application.



## Advanced Geosynthetic Solutions



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