

# Sheet piling type Gouda and Delfland

Patent NL2013936



## Bank protection for longer periods of time

**The sheet piles of HIP Groen from Driebruggen combines recycled plastic HDPE without (toxic) plasticizers with European PEFC softwood. Plastic HDPE is used above the waterline and on the water surface, while European softwood with a sufficiently dense structure, such as spruce, is used below the waterline. Thanks to this unique combination of materials, the sheet pile has a technical lifespan of 50 years.**

Plastic HDPE is of high quality, fully recycled and recyclable again. This raw material does not contain toxic plasticizers such as phthalates, trimellitates, adipates and other harmful additives, as it is a pure, post-industrial stream. In addition, HDPE is naturally resistant to the elements.

The wood in this sheet pile is European softwood, sourced from sustainably managed forests, which is demonstrated with a PEFC certificate.

Wood above the waterline is susceptible to fungal infestation. Below the waterline, on the other hand, there

- ✓ Plastic HDPE (100% recycled)
- ✓ European Softwood (PEFC)
- ✓ Technical lifespan 50 years
- ✓ Quick and easy to install
- ✓ Cost effective

is too little oxygen for fungi to thrive. Bacteria are active below the waterline. However, the rate at which bacteria attack wood is very low, provided that both the sapwood and the heartwood have a sufficiently dense structure. To prevent the wood from drying out, the sheet piling is suitable for areas where the fluctuations in the water level do not fall lower than the plastic part.

The possibility of using up to 90% softwood with this sheet pile results in a low cost price and low environmental costs.

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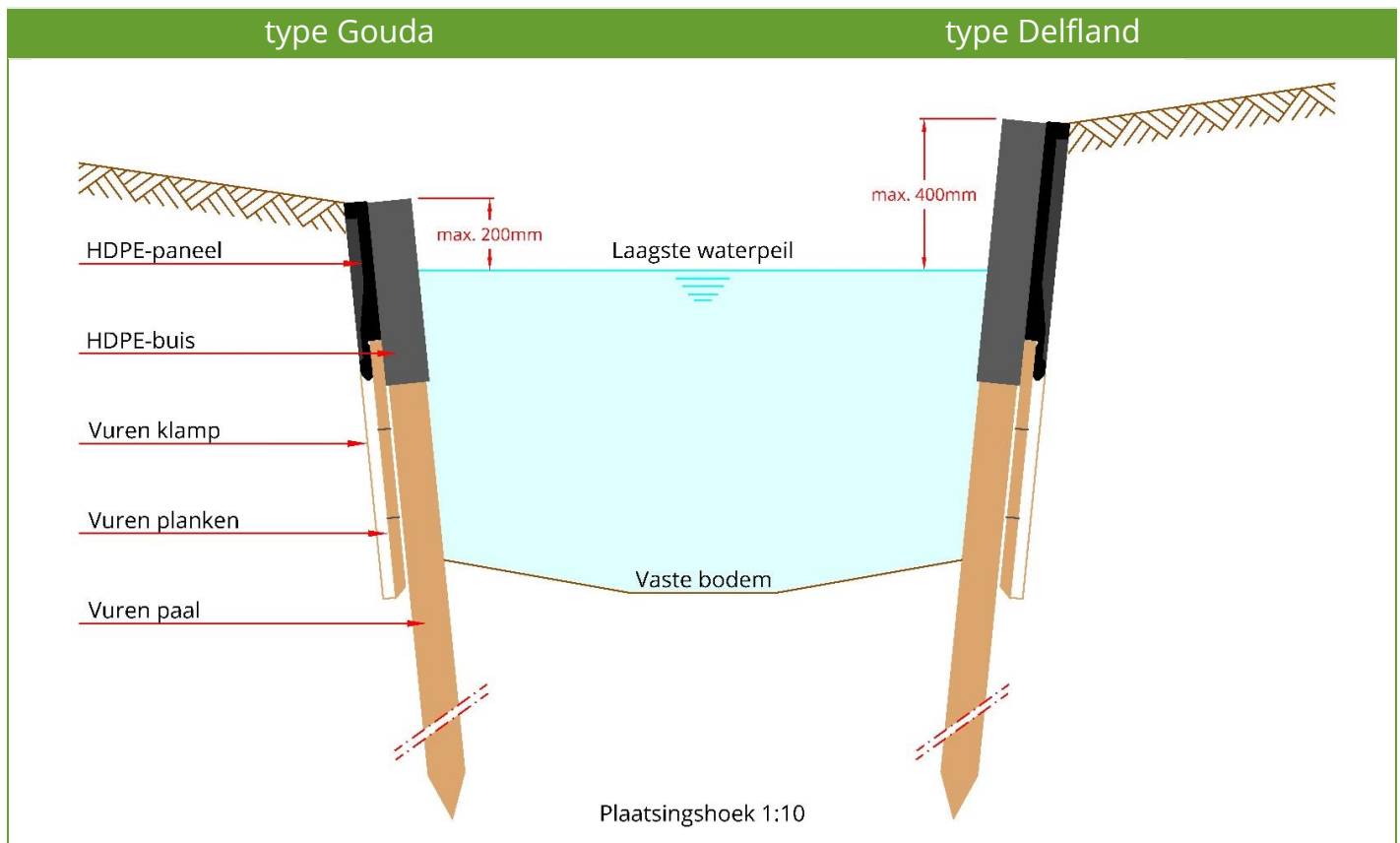


This combi sheet pile is sturdier than fully plastic sheet piles. The sheetpiling can be vibrated into the soil with a vibrating hammer and can therefore be used in challenging soils with rubble and sand layers.

This sheet piling system is also quick to install. First of all, the supplied guide tubes are mounted on the sheet pile, after which he is placed.

The poles can then be quickly put in the right place by simply inserting them into the guide tubes. As a result, the time-consuming process of setting out poles is a thing of the past. Carriage bolts are also superfluous because the pre-dried poles clamp themselves into the guide tubes as soon they have filled up with water. Until then, a screw is sufficient to fix the sheet pile against drifting.

### Principle drawing



### Products specifications

	Type Gouda	Type Delfland
Application	Sheet up to 20 cm above the lowest waterline	Sheet up to 40 cm above the lowest waterline
Material	100% recycled plastic HDPE (UV stabilized) and European PEFC softwood	100% recycled plastic HDPE (UV stabilized) and European PEFC softwood
Dimensions	Combi-sheet piling <ul style="list-style-type: none"><li>- Height 45-200 cm</li><li>- Width 250 cm, optional 125 cm</li><li>- Thickness top edge HDPE 6 cm</li><li>- Thickness wood 3 cm</li></ul>	Combi-sheet piling <ul style="list-style-type: none"><li>- Height 65-200 cm</li><li>- Width 250 cm, optional 125 cm</li><li>- Thickness top edge HDPE 6 cm</li><li>- Thickness wood 3 cm</li></ul>
	Cylindrical milled poles <ul style="list-style-type: none"><li>- Length 200-500 cm</li><li>- Thickness <math>\varnothing</math> 8 1/2 cm, 9 1/2 cm, 12 and 14 cm</li></ul>	Cylindrical milled poles <ul style="list-style-type: none"><li>- Length 200-600 cm</li><li>- Thickness <math>\varnothing</math> 8 1/2 cm, 9 1/2 cm, 12 and 14 cm</li></ul>
Lifespan	50 years	50 years
Finishing	Black Smooth Plastic Panels with Tubes	Black Smooth Plastic Panels with Tubes

## Optional finishes

### ✓ Basic



The sheet piles and tubes do not need to be finished. The whole is structurally strong enough to be applied without any finishing.

### ✓ Cover cap



The plastic tubes can be covered with a cap for a neat finish. The cap is aesthetic and has no functional value.

### ✓ CorTensteel



The characteristic rust colour of CorTen steel gives the sheet pile a modern look. A deck apron made of CorTen steel has a technical lifespan of 50 years.

### ✓ Hardwood



The sheet pile can be combined with a certified hardwood finish. The possible combinations are a front and deck board or a purlin with deck board.

## Advice and (start-up) service

Prior to the production of the sheet piling, the bank bed is accurately measured to ensure that the correct dimensions of the sheet piles are supplied. HIP Groen also offers guidance in the installation of the sheeting, in the form of a free start-up service. In consultation with the client, it is determined when the project will start and whether a HIP Groen expert is available. In this way, the contractor is assisted on site in processing the first meters of sheet piling.

## Sheet piles in color Brown

To match the allure of hardwood, HIP groen offers the possibility to produce the sheet piles in a warm shade of brown on request. In this way, the aesthetics of hardwood are created, but with double the lifespan of plastic.



## Fauna supply

Where sheet piling is used, steep fronts are created, which form an obstacle in the habitat of various animals. Placing a fauna ladder is a small intervention that helps animals to get out of the water. Animals that use fauna stairs include frogs, waterfowl and pets. Fauna stairs are suitable as a care measure in the context of the duty of care as described in the Flora and Fauna Act. The fauna stairs of HIP Groen are pre-assembled. All they need to be done is to be attached to a suitable location.



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HIP Groen B.V. develops and produces sustainable, outdoor products.

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