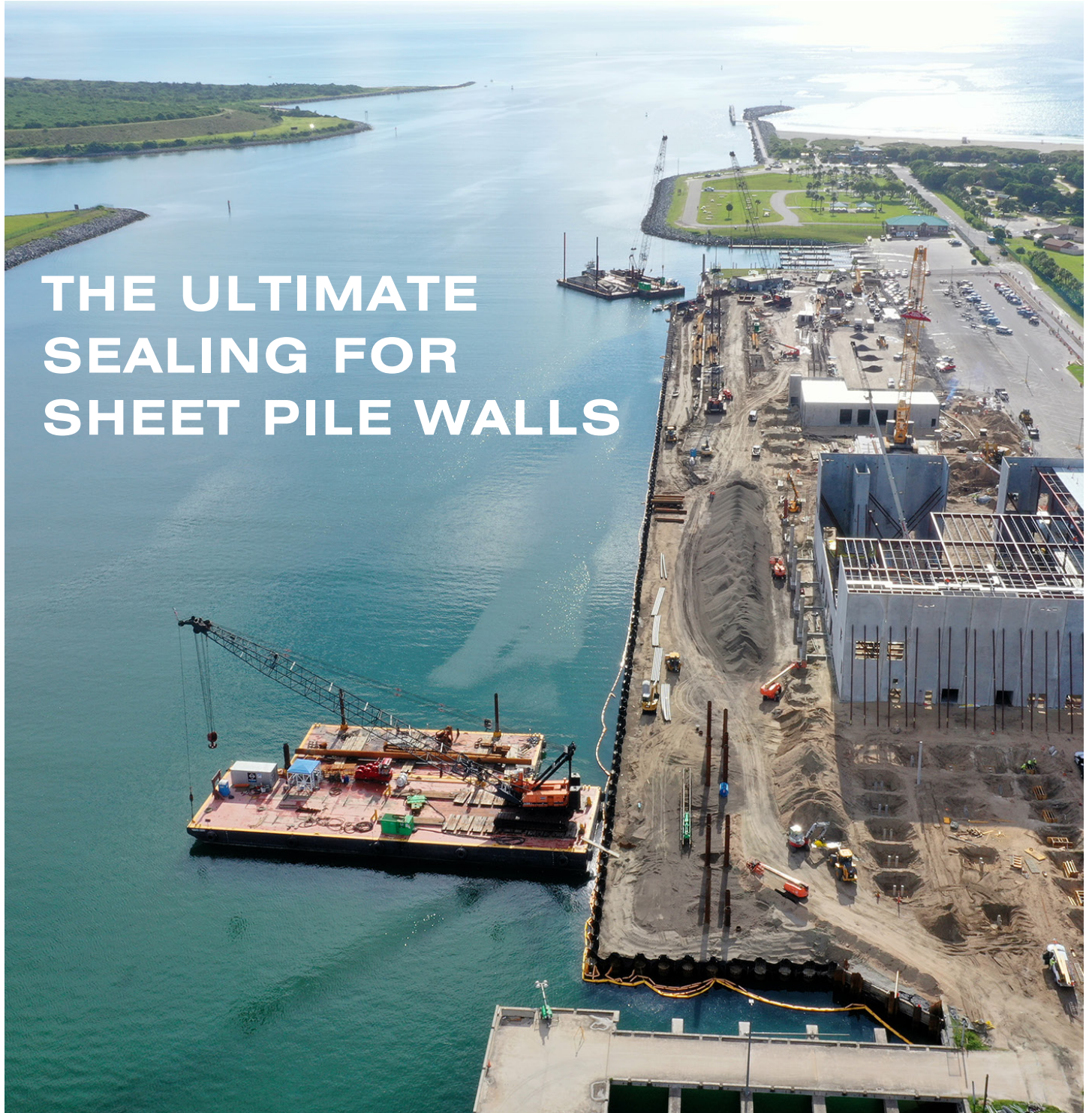


# THE ULTIMATE SEALING FOR SHEET PILE WALLS





## ENVIRONMENTAL CONTAINMENT

### The perfect sealant - over 24 years of global experience

#### Steelant® is a high efficiency water sealant.

It is applied to steel sheet pile interlocks, made from sustainable natural raw materials and designed to be hot applied. When properly cured, STEELANT® provides a highly reliable water seal for sheet pile walls. It is one of the few sealing materials with a large load capacity yet still has extremely green credentials. As an interlock sealant, it has been used successfully throughout the world for more than 15 years. In this time, STEELANT® has proved to be an extremely stable material that produces outstanding results even in extreme climatic conditions such as in the tropics or the Arctic.

#### For all sheet pile wall constructions:

- Temporary sheet pile wall constructions
- Permanent sheet pile wall constructions
- Casting of the sheet pile wall interlock  
Sheet pile wall constructions in soil containing ground water and a small fine particle fraction (gravel-type soil) and in soils with the consistency of clay
- Reduces interlock friction during driving.

#### Applications:

- Cofferdams in soil types with a high ground water level
- Dam renovation work
- Sealing of riverbanks
- Delimitation of underground water courses in water protection zones Sealing work on concrete and steel components

#### Applicable even in catch areas of drinking water collection systems

Steelant® is environmentally friendly in both production and use.

Steelant® is made under a patented formulation, designed to be highly effective and yet environmentally sound.

Official confirmation from the State Trade Supervision Department for Bavaria shows that this material is extremely "green" and even suitable for use in catch basins of drinking water systems.

Results (extract)

"The reports from the LGA come to the conclusion that the sealing compound can be used in sheet pile walls for ground and surface water without any restrictions at all. Therefore, if the product is used as intended there is no concern of harmful effects in the catchment area of drinking water collection systems."

## ENVIRONMENTAL REMEDIATION

### Safe and effective at water pressure levels up to 5 bar Stable and non-deforming in temperatures of up to 50°C (122°F)

STEELANT® is highly resistant to water and offers a unique and durable bond. When properly applied to the interlock chamber, STEELANT® is resistant to extreme conditions such as water pressure, ice, soil as well as movements of the sheet pile wall or displacement of the piles during transport. The material remains stable and non-deforming in the interlock even in peak daytime temperatures of 50°C (122°F).

In laboratory tests the material underwent extreme tests and was subjected to a maximum water pressure of 5 bar (5 atmospheres or 500 kPa. Roughly 130 feet of water depth). STEELANT® demonstrated no water permeability in various interlock forms during these test series.

#### Summary

STEELANT® can be used both for water pressure sealing requirements and large sheet pile lengths.

#### Flexibility with memory effect

STEELANT® contains natural rubber that gives it a unique elasticity. Thanks to this feature the sealant tolerates torsion and movements in the sheet pile wall interlock, maintains a cohesive seal, and returns to its initial position in normal or cold conditions. Conventional materials may become brittle as ambient temperatures fall to 10°C or less, which often leads to problems when work is being carried out in ground water. When installing sheet pile walls, sealant must not become brittle and remain in the interlocks to prevent leaks. STEELANT® solves this problem because it remains perfectly flexible even in low temperature ground water (which usually remains at a temperature of between 5°C to 7°C throughout the year). STEELANT® never becomes brittle and continues to create a perfect seal.

Unlike some competing material, STEELANT® does not require “activation”, it is usable as soon as the material has cooled and cured.



## WATERPROOFING

### Less friction

STEELANT® acts as a thin film of lubricant in the interlock chamber which reduces interlock friction during the driving process.

### For any pile driving equipment

STEELANT® is suitable in equal measure for all driving methods of sheet piles (impact driving, vibration and pressing).

### Innovative packaging

Simply remove the staples and place the entire sack of STEELANT® in a suitable heating chamber or application machine. The sealant will be melted completely together with its packaging. The entire package and content are used and ensures that no residual waste is created.

Ideal for precise quantity calculation, one sack of STEELANT® contains 25 kg (55 lb.) of ready-to use sealing compound. In normal operating temperatures, no additional material is required, however, in extreme temperature conditions STEELANT®-Softener can be added.

### Seal and drive

After installation STEELANT® should be allowed to cool and cure. Depending on weather conditions, it is usually ready to drive in about 20-45 minutes.



## Description

- Base material: Organic, natural raw materials
- Color: Olive-black
- Form: Solid
- Container: 25 kg polyethylene sacks which are melted with the material
- Melting temp: 130 to 170 °C
- Melting unit: Compound heater, ideally: Indirect thermal bath heater
- Soluble in: High concentrations of organic solvents such as xylene, benzene and biodiesel
- Density at 20 °: 0.994g (cm<sup>3</sup>)

## Recommended quantity & instructions

### Application quantity

Depending on the type of interlock, a quantity of about 250 g of STEELANT® will be required per meter of sheet pile wall. The quantity may be higher for used piles depending on requirements.

### Additive application - STEELANT®-Softener

The addition of STEELANT®-Softener depends on the outdoor temperature at the time of the pile driving work.

- Above +5 °C: No additive required
- Down to -5 °C: 2 liters per 25 kg of STEELANT®
- Below -5 °C: 5 liters per 25 kg of STEELANT®

STEELANT®- Softener is supplied in 20-liter canisters.

### IMPORTANT

Avoid overheating the casting compound at all costs since otherwise the quality of the material may be drastically reduced. The temperature must be a minimum of 130°C and a maximum of 170°C. It should be checked at regular, short intervals. During the heating phases the casting compound must be stirred at regular intervals depending on the requirement of the equipment used. Overheated casting compound must not be used.

### Storage

STEELANT® can be stored for an unlimited period. Avoid direct UV radiation. Recommended temperature below 30°C.

### Filling heights for interlock chambers

**LARSEN**  
  
approx. 40%

**HOESCH**  
  
approx. 40%

**PZ/PZC**  
  
approx. 50%

**COLD FORMED**  
  
approx. 50%