

## PRODUCT DATA SHEET

# SikaWrap®-450 Pile Jackets MY

FRP pile jacket for corrosion protection and strengthening works

### DESCRIPTION

SikaWrap®-450 Pile Jackets MY is an advanced FRP composite material designed specifically to become an integral part of the repaired structure with the marine environment and industries in mind. Used as an external FRP cover for marine piles protection and pile strengthening mainly at the splash and tidal zone.

SikaWrap®-450 Pile Jackets MY provides a permanent long-term protection of the repair in hostile marine environments.

### USES

SikaWrap®-450 Pile Jackets MY may only be used by experienced professionals.

SikaWrap®-450 Pile Jackets MY is used to protect marine piles from mechanical damages, corrosion protection and weathering. It can also be used as a permanent formwork for pressure grouting. SikaWrap®-450 Pile Jackets MY together with the grouting materials improve the strength of the piles and corrosion protection properties. It can be designed to retrofit any round or square piles dimensions.

### CHARACTERISTICS / ADVANTAGES

- Can be design to tolerate heavy design loads
- Rapid installation
- Good flexibility and toughness provides good impact resistance
- Suitable for any size and profile pile in marine and dry locations
- Provides wide range of resistance to seawater, chemicals and pollutants
- Light weight for easier and safer to handle
- Excellent weathering properties
- Long life repair hence reduced on-going maintenance cost
- Good crack initiation and propagation properties
- UV resistance

### PRODUCT INFORMATION

<b>Fibre Type</b>	Glass fibre
<b>Packaging</b>	Fabricated according to order, shrink wrap by piece
<b>Shelf Life</b>	24 months from date of production
<b>Storage Conditions</b>	Store in undamaged, original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from direct sunlight.
<b>Mass per Unit Area</b>	Chopped Strand mat 450 g/m <sup>2</sup> (3 layers)
<b>Cross Section</b>	12 mil corrosion surfacing veil

# TECHNICAL INFORMATION

Tensile Strength in Flexure	Laminate Flextural Strength ~169 MPa	(ASTM D790)
Laminate Tensile Strength	~110 MPa	(ASTM D3039 / D3039M)
Laminate Modulus of Elasticity in Tension	~7.47 GPa	(ASTM D3039 / D3039M)
Laminate Nominal Thickness	2.5–4.0 mm	
Dry Fibre Density	~1.48 g/cm <sup>3</sup>	(ASTM D792-20)

## BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

Concrete, steel and timber piles require thorough cleaning, all loose particle removed and must be sound prior to installing SikaWrap®-450 Pile Jackets MY. Clean existing piles using a high-pressure washer, typically min. 17 MPa (2500 psi) to max. 27 MPa (4000 psi) when measured at the nozzle, and/or other mechanical means of clearing piles of marine growth, rust, oil, scaling, spalling and other contaminants.

## APPLICATION METHOD / TOOLS

1. All indicated levels of pile protection shall need to be cleaned and free of all loose materials, rust, marine growth and etc by means of scrapping and high pressure water jetting.
2. Install prefabricated steel cages as reinforcement if necessary as per engineer's requirements.
3. Install spacer blocks for the required annular space as per engineer's requirements
4. Place and install SikaWrap®-450 Pile Jackets MY as permanent formwork using special made steel collar or clamps with tensioning devices and fasten using stainless steel bolts.
5. The installed SikaWrap®-450 Pile Jackets MY must be watertight at all joints and at the base to prevent grout leakage.
6. Pump flowable grout / microconcrete to fill up the internal annular space of the installed SikaWrap®-450 Pile Jackets MY. The grouting procedure shall commence from the lowest inlet grout port and continue until the grout flows out from the top.
7. Remove the steel clamps after the grout/microconcrete had set.
8. Important Notes : Installation of SikaWrap®-450 Pile Jackets MY must be carried out by personnels that had undergone training on the installation method.

## LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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