



PROTECTING YOUR WORLD

# SPLASHpro

## SPLASHpro M1 Series

Banded HDPE System

### Description

Corrosion Protection Solution for Wharf Pilings in Marine Environments. SPLASHpro M1 stops corrosion on Pilings within the Wave Zone by using Central Products STACwrap Materials: STACprime UW, STACfill, and STACwrap; Secured to the pilings with custom designed SPLASHpro HDPE Outer covers using the customer-specified banded design.

### Uses

Ideal for the corrosion protection of near shore Wharf and Jetty Pilings made of Steel, Timber, and Concrete. Offshore applications on Coastal Beacons, Subsea Pipelines, Risers, and Platforms. Also used on Ocean Vessels and various structures in Ports and Harbors for corrosion protection from harsh marine conditions.

### Characteristics

SPLASHpro M1 Series is easy to apply, has a low relative cost, and has been proven effective aggressive marine environments.

SPLASHpro M1 Series can be removed for periodic inspections of the STAC Coating System and substrate.

SPLASHpro M1 Series is designed specially for exposed conditions. It contains no additives or fillers which can leach out and cause deterioration over time.

### Application

Remove all loose rust, coatings and marine growth by hand /power tool cleaning and/or water blasting to SSPC SP 2 / 3.

STACprime is applied in a circular motion to the prepared steel by a gloved hand or power roller.

STACfill should be utilized to better contour the substrate for large surface imperfections, or when encountering intersecting cross members.

STACwrap is to start from the bottom of the area to be protected with a double turn, then spirally apply with a 55% overlap to ensure a double thickness of material, and finish the wrap with a double turn.

The mechanical tensioning and securing of the Outer cover is achieved by the utilization of a banded system with a tension wrench.

Particulars	Properties			Test Method
	M1-80	M1-100	M1-120	
Material	M1-80	M1-100	M1-120	---
Nominal Thickness, mm	2.0	2.5	3.0	ASTM-D5199
Density, g/cm <sup>3</sup>	0.94	0.94	0.94	ASTM-D1505
Tensile Properties: -				ASTM-D638
Yield strength, N/mm	30	38	45	Type IV,2 ipm
Break strength, N/mm	57	71	85	
Yield elongation, %	13	13	13	G.L.1.3 in.(33mm)
Break elongation, %	700	700	700	G.L.2.0 in.(51mm)
Tear resistance, N	267	334	400	ASTM-D1004
Puncture resistance, N	703	881	1059	ASTM-D4833
Carbon black content, %	2.0-3.0	2.0-3.0	2.0-3.0	ASTM-D1603
Notched constant tensile load, hours	400	400	400	ASTM-D5397
Melt index, g/10min.	1.0	1.0	1.0	ASTM-D1238
Oxidative induction time, min.	100	100	100	ASTM-D3895
Low temperature brittleness, °C	-77	-77	-77	ASTM-D746

### Strapping System

Type	Thickness (mm)	Width (mm)	Breaking Strength (lbs)
316 SS	0.76	19.05	1800
317L SS	0.76	19.05	2580
PA11/PA11GF	3.6	10 – 25	340 – 2250
PA66/POM	3.6	10 – 25	485 – 1900

Note: Smart Band is available in a number of materials Acetal POM, Nylon 6.6. (PA66), Nylon 11 (PA11) and Nylon 11 Glass Filled (PA11GF).

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# STACprime

## STACprime UW

Wet Surface Primer

### Description

A unique blend of petrolatum and petroleum components containing water displacing and corrosion inhibiting agents, fillers, and flow control additives. Can be formulated with broad spectrum biocides. Designed specifically to be applied underwater to submerged structures, no need to dry the surface.

### Uses

A key component of STAC systems for the initial treatment of metal surfaces prior to profiling and wrapping. It displaces surface moisture, passivates surface oxides, fill surface imperfections, and ensures adhesion between STACwrap, STACfill, and the substrate. Used widely on Marine Pilings and various structures made of Steel, Timber, and Concrete, above and below the tide line.

### Characteristics

STACprime UW is non-drying, non-hardening and non-toxic.

STACprime UW is impervious to water.

STACprime UW is highly resistant to mineral acids, alkalis and salts. It will not support combustion, no V.O.C.'s.

### Application

Remove dirt, grease, oil, excessive moisture and frost, loose rust, paint and foreign matter by hand and/or power tool cleaning in accordance with SSPC SP2 or SP3.

Apply a thin, uniform film over the entire surface to be wrapped with gloved hand, brush or rag.

Apply a liberal coating to displace surface moisture, passivate surface oxides, fill surface imperfections and ensure adhesion between STACwrap and the substrate.

SSPC Number	Specification	Surface Preparation	Common Coating Minimum SSPC Requirement
SSPC-SP1	Solvent Cleaning	For removal of oil, grease, and other soluble materials prior to removal of mill scale, rust, and coating by other methods.	
SSPC-SP2	Hand Tool Cleaning	For removal of loose mill scale, rust, and coating by hand sanding, scraping, chipping, or other impacting.	Drying Oil, Petrolatum
SSPC-SP3	Power Tool Cleaning	For faster removal of loose scale, rust, and coating by power wire brushes, grinders, sanders, or impact tools.	Drying Oil, Petrolatum
SSPC-SP4	Flame Cleaning of New Steel	For preparing unpainted steel with oxy-acetylene flame, followed by wire brush removal of loosened by mill scale and rust.	
SSPC-SP5	White Metal Blast Cleaning	For preparing metal surfaces for coating by removing all mill scale, rust, rust-scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels.	Inorganic Zinc
SSPC-SP6	Commercial Blast Cleaning	For preparing metals surfaces for coating by removing mill scale, rust, rust-scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels.	
SSPC-SP7	Brush-Off Blast Cleaning	For preparing metal surfaces for coating by rapidly removing only loose mill scale, loose rust, and loose paint by abrasives propelled through nozzles or by centrifugal wheels.	
SSPC-SP8	Pickling	For preparing metal surfaces for coating by removal of mill scale and rust by chemical reaction, electrolysis, or both.	
SSPC-SP9	Weathering Followed by Blast Cleaning	Method no longer used.	
SSPC-SP10	Near White Blast Cleaning	For preparing metal surfaces for coating by removing nearly all mill scale, rust, rust-scale, paint, or foreign matter by the use of abrasives propelled through nozzles or by centrifugal wheels.	Alkyd, Oleorsinous Phenolic, Coal Tar, Asphaltic, Vinyl, Chlorinated Rubber, Epoxy, Coal Tar Epoxy, Urethane, Organic Zinc

### Data Sheet

Particulars	Properties
Specific gravity	0.95 - 1.1 range
Application temperature	-25 °C to +55 °C
Operation temperature	-35 °C to +55 °C
Flash point	> 180 °C
Coverage	1 to 3 m <sup>2</sup> /ltr.
Packaging	3.18 kg./bucket avg. 4 buckets/Case



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# STACfill

## STACfill

Profiling Compound

### Description

A unique blend of saturated petroleum hydrocarbons, fillers and reinforcing fibers. Conforms easily to surface irregularities, fills voids, displaces pockets of trapped air, ensuring complete protection of the substrate.

### Uses

A putty-like compound used for profiling around valves, flanges, nuts, bolts and other irregular shapes to improve contours and fill voids prior to wrapping with STACwrap. The soft petrolatum compound self-amalgamates at each overlap providing a continuous protective layer.

### Characteristics

STACfill is non-hardening and self-supporting compound which accommodates vibration and mechanical stress.

STACfill is highly resistant to mineral acids, alkalis and salts.

STACfill is non-toxic and will not support combustion, no V.O.C.'s.

### Application

Apply STACfill by filling and packing to achieve an uniform contour to which tape can be applied without bridging or voids.

Use a putty knife or gloved hand to apply STACfill in voids, cavities, etc.

Contour extremely uneven surfaces and remove air pockets.

Apply STACwrap and/or STACguard Overwrap for Mechanical protection.

Category	Chemical Concentration	% by Volume	After 3 Months	After 1 Year
Acids - Inorganic	Nitric Acid (HNO <sub>3</sub> )	10%	/	∅
		50%	X	X
	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	10%	V	X
		25%	∅	X
	Chloric Acid (HClO <sub>3</sub> )	10%	/	(x)
		CONC	V	X
Phosphoric Acid (H <sub>3</sub> PO <sub>3</sub> )	50%	V	X	
	90%	(x)	(x)	
Acids - Organic	Acetic Acid (CH <sub>3</sub> COOH)	10%	(x)	V
	Formic Acid (HCOOH)	10%	/	/
	Lactic Acid (C <sub>3</sub> H <sub>6</sub> O <sub>3</sub> )	10%	/	/
	Boric Acid (H <sub>3</sub> BO <sub>3</sub> )	10%	/	/
	Tartaric Acid (C <sub>4</sub> H <sub>6</sub> O <sub>6</sub> )	10%	/	/
	Oxalic Acid (COOH)	10%	/	/
	Citric Acid (C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> )	10%	/	/
Alkali	Ammonium (NH <sub>4</sub> )	28%	/	/
	Caustic Soda (Sodium Hydroxide) (NaOH)	5%	/	/
		20%	/	/
	Caustic Potash (Potassium Hydroxide) (KOH)	5%	/	/
		20%	/	/
	Carbonic Soda	20%	/	/
Salt etc.	Sodium Chloride (NaCl)	20%	/	/
	Ammonium Sulfate (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	20%	/	/
	Hydrogen Peroxide (H <sub>2</sub> O <sub>2</sub> )	20%	/	/

/ - No Damage (x) - Slight Damage ∅ - Damage V - Great Damage X - Complete Destruction

Measuring method: Test coupons of mild steel plate (1mm x 50mm x 120 mm) are double layer wrapped with 50 mm (2") STACwrap, then immersed in each chemical, observing and recording changes over time.

### Data Sheet

Particulars	Properties
Density	1.38 g/cm <sup>3</sup>
Application temperature	-5 to +55 °C
Operation temperature	-35 to +70 °C
Packaging	3 kg/block, 8 blocks/Case



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# STACwrap

## STACwrap Marine

## SPLASHpro Marine Tape

### Description

Non-woven, stitch-bonded, synthetic fabric carrier; fully saturated and coated with a neutral petrolatum compound blended with inert fillers and corrosion inhibitors. Typically Formulated with broad spectrum Biocides.

### Uses

For long-life corrosion protection, sealing, and waterproofing of atmospheric, buried, and submerged applications in marine environments. High degree of conformability, ideal for Ocean Pilings of Steel, Concrete, and Timber; Protects Marine Wharfs and various Port Structures: use on Ocean Ships and Maritime Vessels. Compatible with all SplashPro Ocean Protection Systems.

### Characteristics

STACwrap is stable in composition and plasticity over a wide temperature range. Typically Formulated with Biocides.

STACwrap is non-hardening and non-cracking, which accommodates vibrations and extreme movement of the substrate.

STACwrap is non-toxic with high dielectric strength and highly resistant to mineral acids, alkalis and salts.

### Application

Spirally wrapped using a minimum 2.5 cm overlap; where additional protection is required, and for all buried applications, the overlap shall be increased to 55% to ensure a double thickness of material. For vertical applications the wrap shall begin at the bottom and proceed up – providing a “weatherboard” overlap. Requires SplashPro Outerwrap Jacketing or equivalent.

May apply longitudinally (i.e., “cigarette wrapped”) when space is too restricted or confined to apply in the preferred spiral manner, with the overlap on the topside of the pipe – providing a “weatherboard” effect.

At the completion of each roll, smooth the overlaps by hand in the direction of the spiral to ensure sealing of the overlap. Maintain a 5 cm overlap when overlapping one roll with the end of a new roll. Overlap must occur on the top half of the pipe.

Particulars	Properties	Test Method
Thickness	1.2mm avg.	ASTM-D1000
Weight	>1.4kg/m <sup>2</sup> avg.	---
Tensile strength	200N / 50mm	ASTM-D1000
Cathodic disbondment	180 mm <sup>2</sup> avg.	ASTM-G8
Dielectric rigidity (55% overlap)	≥ 16 kV	ASTM-D1000
Water vapor permeability	0.006 perms avg.	ASTM-E96
Resistance to Acids, Alkalies and Salts	Excellent	---
Application temperature	-5 to +55 °C	---
Operation temperature	-35 °C to +50 °C	---
Recommended Primer	STACfill STACprime UW	---

Compliant with ANSI/AWWA C217 STANDARD

\* Additional Specs available by request - Thickness: 1.3mm avg.; Weight: > 1.5 kg/m<sup>2</sup> avg.

Tape Dimensions			
Tape Width	m2/Roll	m2/Case	Pipe Diameter Range
50 mm	0.50	18	15 – 25 mm
75 mm	0.75	18	25 – 40 mm
100 mm	1.00	18	40 – 80 mm
150 mm	1.50	18	100 – 200 mm
200 mm	2.00	16	250 – 600 mm
300 mm	3.00	18	≥ 700 mm

\* All rolls are 10 meters in length.

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