SUBSEA HYDRAWRAP
STRUCTURAL COMPOSITE REPAIR SYSTEM

HydraTech ENGINEERED PRODUCTS

HydraTech *SubSea* HydraWrap SYSTEM

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- ***SubSea*** **HydraWrap** is a repair system engineered to restore or enhance the structural integrity of pipe and infrastructure. The system is specifically designed for applications where the conditions contain moisture or are completely submerged underwater.
- The ***SubSea*** **HydraWrap** system is a uniquely designed high performance Carbon Fiber Reinforced Polymer (CFRP) Composite that consists of an epoxy primer, epoxy wet-out resin, and carbon fiber fabric.
- The Primer provides excellent adhesion to a variety of substrates under water submersion.
- The Wet-Out resin is designed to thoroughly wet out the fiber forming a composite matrix with a very high tensile and flexural properties under water submersion.

ADVANTAGE

- Rapid development of physical properties with cure under water
- No post cure required
- Chemical and Corrosion Resistant Structural Repair
- Zero VOC (as applied)
- Low temperature cure down to 40ºF (4ºC).
- Restores Maximum Allowable Operating Pressure (MAOP)

The HydraTech ***SubSea*** **HydraWrap** system is a performance driven product that provides a chemical and corrosion resistant structural repair for piping and infrastructure in conditions that contain moisture or are completely submerged. The ***SubSea*** **HydraWrap** system offers a low cost, long term solution to the most challenging demands of the industry.

SUBSTRATE PREPARATION

Substrate preparation dictates the adhesion performance of any coatings system. A properly prepped surface will ensure maximum life and performance of the system.

Concrete: NACE No.6* / SSPC-SP13*

Steel: NACE No.2* / SSPC-SP 10*
NACE No.3 / SSPC-SP 6
NACE No.5 / SSPC-SP 12
*indicates recommended method

PROPERTIES

	Primer	Wet-Out
Color	Grey	Clear
Working Life – 68ºF (20ºC)	30 minutes	30 minutes
Dry Times – 68ºF (20ºC)	4 Hours	4 Hours
% Vol Solids (ASTM 2369)	100	100
Shore D Hardness (ASTM D2240)	80	85

Mix Ratio - Pre-measured 1:1
Flash Point - > 200ºF (93ºC)
Storage Life - Twelve months when stored in original sealed containers, between 50-77ºF (10-25ºC)
Taber Abrasion Resistance - ASTM D4060 <500 (H18, 1000g, mg of loss/1000 cycles)

For details regarding the testing associated with the provided data refer to the HydraWrap Testing and Design Sheet.

PERFORMANCE DATA

ADHESION ASTM D4541(24Hr cure)

Cold Rolled Steel	>1200 psi
Hot Rolled Steel	>1200 psi
Cast Iron	>1200 psi
304 Stainless Steel	>1200 psi
316 Stainless Steel	>1200 psi
Concrete	Concrete Failure

APPLICATION REQUIREMENTS

Minimum Application Temperature	40ºF (4.4ºC)
Thinning	Do not thin
Cleaning Fluid	Universal Equipment Cleaner
Note	To aid application at low temperatures, both components should be warmed to 60-68ºF (15.5-20ºC) prior to mixing.

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INSTALLATION PROCEDURE

- Prepare substrate according to NACE / SSPC specification.
- Measure fabric around pipe to ensure at least two layers of fabric. Cut fabric to desired lengths.
- Mix both Wet-Out components for two minutes.
- Apply Wet-Out to fabric via spreader or impregnator ensuring complete wet out of fabric. Turn fabric over. (Figure 1)
- Mechanically mix together both primer components until uniform.
- Apply Primer to opposite side of fabric via brush or spreader. (Figure 2)
- Apply Primer side to substrate ensuring a consistent, smooth wrap free of voids. Work until a uniform gray is achieved (Figure 3)
- After first wrap, tug gently to ensure wrap is tight. (Figure 4)

*For details regarding application refer to the HydraWrap Installation Procedure

NOTE

The **HydraTech *SubSea* HydraWrap** System is not intended for applications with exposure to strong acids, organic acids, strong solvents (MEK, Acetone, Alcohol) or high temperatures (>200ºF). To be applied by certified personnel only. See MSDS for safety information.

	Unit Size	Coverage
PRIMER	**Pt**	**4.5** sqft
	Qt	**9** sqft
	Hg	**23.5** sqft

WET-OUT	**Pt**	**4** sqft of fabric
	Qt	**8** sqft of fabric

(Primer coverage based on 32mil film build. Wet-Out coverage based on 99.36g/sqft of 300C fabric.)

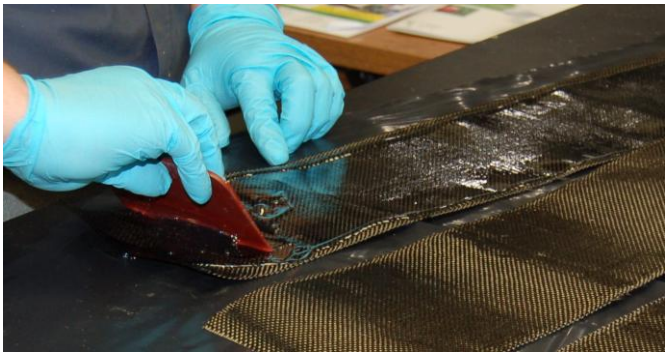

Figure 1

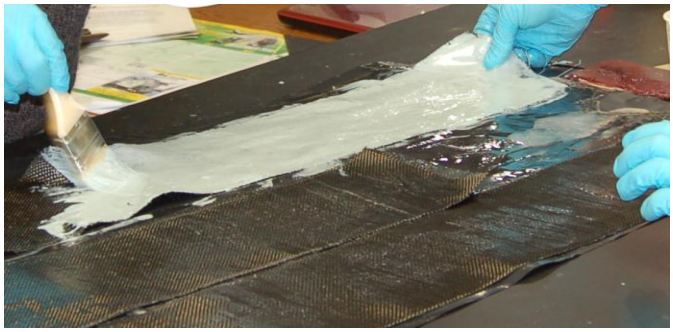

Figure 2

Figure 3

Figure 4