

HydraTech HydraWrap® E System Fiberglass Composite Repair System

Issue 10.14

The HydraWrap system is a performance driven product that provides a chemical and corrosion resistant structural repair. The HydraWrap system is backed by our engineering staff that services each application with assessment and technical support. It offers a low cost, long term solution to the most challenging demands of the industry.

PRODUCT DESCRIPTION

- HydraWrap E is a Fiberglass Repair System repair system engineered to restore or enhance the structural integrity of pipe and infrastructure.
- HydraWrap E is a uniquely designed high performance system that consists of a 100% solids high build epoxy Primer, a 100% solids epoxy Wet-Out resin, and fiberglass fabric.
- The Primer provides excellent adhesion to a variety of substrates while allowing a sag free application at high film builds.
- The Wet-Out resin is designed to thoroughly wet out the fiber forming a composite matrix with a very high tensile and flexural properties.

Advantages

- Rapid development of physical properties with ambient cure. No post cure required.
- Chemical and Corrosion Resistant Structural Repair
- High Tensile / Flexural Modulus and Strength
- 100% Solvent-Free, Zero V.O.C.
- Low temperature cure down to 40°F (4°C)
- Installed by fully trained application specialists
- Full contract support services available

PHYSICAL PROPERTIES

	<u>Primer</u>	<u>Wet-Out</u>
Color	Steel Blue	Clear
Working Life – 68°F (20°C)	15 minutes	15 minutes
Dry Times – 68°F (20°C)	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	> 200°F (93°C)	
Storage Life	Twelve months when stored in original sealed containers, between 50-77°F (10-25°C)	

PERFORMANCE DATA

CHEMICAL RESISTANCE ASTM D543 (30 day immersion)

Water	No effect
Sodium Hydroxide 5%	No effect
Ammonium Hydroxide 5%	No effect
Sodium Hypochlorite (bleach)	No effect
Ferric Chloride 1%	No effect
Sulfuric Acid 20%	No effect
Nitric Acid 1%	No effect
Detergent Solution	No effect
Gasoline	No effect
Toluene	No effect

ADHESION ASTM D4541 (psi)

Cold Rolled Steel	>2,000
Hot Rolled Steel	>2,000
Cast Iron	>2,000
304 Stainless Steel	>2,000
316 Stainless Steel	>2,000
Concrete	Concrete Failure

(Testing reflects results after 24 hour cure)

Maximum Operating Temperature = 200°F

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

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APPLICATION RECOMMENDATIONS

Minimum Application Temp	40°F (4.4°C)
Maximum Relative Humidity	85%
Substrate Temperature	5°F (3°C) above dew point
Thinning	Do not thin
Cleaning Fluid	Universal Equipment Cleaner

To aid application at low temperatures, both components should be warmed to 60-68°F (15.5-20°C) prior to mixing.

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-SP 13*
Steel:	NACE No.2*	/	SSPC-SP 10*
	NACE No.3	/	SSPC-SP 6
	NACE No.5	/	SSPC-SP 12

*indicates recommended method

NOTE

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

INSTALLATION PROCEDURE

- Prep substrate according to NACE / SSPC spec.
- Measure fabric around pipe to ensure proper length.
- Mechanically mix together both primer components until uniform.
- Apply primer to prepared substrate via brush or spreader.
- Mix both Wet-Out components for two minutes.
- Apply Wet-Out to fabric via spreader or impregnator ensuring complete wet out of fabric.
- Apply saturated fabric to wet primer ensuring a consistent, smooth wrap free of voids.
- Allow system to completely cure.
- If exposed to sunlight, top coat the wrap with a light stable top coat.

For details regarding application refer to the HydraWrap Installation Procedure

COVERAGE

	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 99.36gg/sqft of 300C fabric.

ORDER INFORMATION

Part No. for standard kits consist of: **System Code – Pipe Size – Pipe Style**

ex. **SH-12-W** (Standard HydraWrap for 12" Weld Repair)

SYSTEM CODE	PIPE SIZE		PIPE STYLE
SH = Standard	2 = will wrap up to one 2" pipe	14 = will wrap up to one 14" pipe	W = Weld
A = Acid	4 = will wrap up to one 4" pipe	16 = will wrap up to one 16" pipe	E = Elbow
M = Mid-Temperature	6 = will wrap up to one 6" pipe	20 = will wrap up to one 20" pipe	T = Tee
H = High Temperature	10 = will wrap up to one 10" pipe	22 = will wrap up to one 22" pipe	SS = Spiral
SS = SubSea	12 = will wrap up to one 12" pipe	24 = will wrap up to one 24" pipe	U = Universal

*** **NOTE:** Custom kits are available to accommodate nearly any installation. ***

Add an **M** for the Marine Kit Option. Marine Kits includes tools for mixing and applying the HydraWrap System. ex. SH-12-W-M