

HIGH TEMP I WRAP SYSTEM

FAST FACTS	PHYSICAL PROPERTIES		
<ul style="list-style-type: none"> The High Temp I Wrap system is a uniquely designed, high performance Fiber Reinforced Polymer Composite that consists of a 100% solids, high build epoxy primer, a 100% solids epoxy wet out resin, and carbon fiber fabric. The primer provides excellent adhesion to a variety of substrates while allowing a sag free application at high film builds even at elevated temperatures. The wet out resin is designed to thoroughly wet out the fiber forming a composite matrix with a very high flexural modulus. The High Temp I Wrap system is designed to provide a structural repair that will withstand elevated temperatures with minimal post-cure. <p><u>Advantages</u></p> <ul style="list-style-type: none"> High Tensile Modulus and Strength High Temp Resistance with minimal post-cure 100% Solvent-Free, Zero V.O.C. Low temperature cure down to 40°F (4°C). Fully trained application specialists Full contract support services, if required ISO 9001 Design and Manufacture certified 	<p>Color</p> <p>Working Life – 200°F (93°C)</p> <p>Dry Times – 68°F (20°C)</p> <p>% Vol Solids (ASTM 2369)</p> <p>Shore D Hardness (ASTM D2240)</p> <p>Mix Ratio</p> <p>Flash Point</p> <p>Storage Life</p>	<p><u>Primer</u> -</p> <p>Steel Red -</p> <p>60minutes -</p> <p>>24 Hours -</p> <p>100 -</p> <p>75 -</p> <p>Pre-measured</p> <p>> 200°F (93°C)</p> <p>Twelve months when stored in original sealed containers, between 50-77°F (10-25°C)</p>	<p><u>Wet Out</u></p> <p>Clear</p> <p>60minutes</p> <p>>24 Hours</p> <p>100</p> <p>80</p>
<p>HydraWrap System</p> <p>The I Wrap system is a performance driven product that provides a chemical and corrosion resistant structural repair for the interior or exterior of pipe. The I Wrap system is backed by our engineering staff that services each application with assessment and technical support. The I Wrap system offers a low cost, long term solution to the most challenging demands of the industry.</p>	<p>Composite (two ply)</p> <p>Tensile Strength (psi) (ASTM D3039)</p> <p>Tensile Modulus (psi) (ASTM D3039)</p> <p>% Elongation (ASTM D3039)</p> <p>Flexural Strength (psi) (ASTM D790)</p> <p>Flexural Modulus (psi) (ASTM D-790)</p> <p>Adhesion to Steel (psi) (ASTM D4541)</p> <p>Adhesion to Concrete (ASTM D4541)</p> <p>Operating Temperature (°F)</p>	<p><u>Bidirectional</u></p> <p>55,200</p> <p>5,970,000</p> <p>1.1</p> <p>54,100</p> <p>2,360,000</p> <p>>2,000</p> <p>Concrete Failure</p> <p>Up to 350</p>	<p><u>Unidirectional</u></p> <p>118,200</p> <p>10,970,00</p> <p>1.2</p> <p>74,100</p> <p>4,360,000</p> <p>>2,000</p> <p>Concrete Failure</p> <p>Up to 350</p>
APPLICATION RECOMMENDATIONS		SUBSTRATE PREPARATION	
<p>Minimum Application Temperature</p> <p>Maximum Relative Humidity</p> <p>Substrate Temperature</p> <p>Thinning</p> <p>Cleaning Fluid</p>	<p>40°F (4.4°C)</p> <p>85%</p> <p>5°F (3°C) above dew point</p> <p>Do not thin</p> <p>Hunting Universal Equipment Cleaner</p> <p>To aid application at low temperatures, both components should be warmed to 60-68°F (15.5-20°C) prior to mixing.</p>	<p>Substrate preparation dictates the adhesion performance of any coatings system. A properly prepped surface will ensure maximum life and performance of the system.</p> <p>Concrete: NACE No.6* / SSPC-SP 13*</p> <p>Steel: NACE No.2* / SSPC-SP 10*</p> <p>NACE No.3 / SSPC-SP 6</p> <p>NACE No.5 / SSPC-SP 12</p> <p>*indicates recommended method</p>	

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PERFORMANCE DATA		APPLICATION INSTRUCTIONS																																	
<p>CHEMICAL RESISTANCE ASTM D543 (31 day immersion)</p> <table border="0"> <tr><td>Water</td><td>No effect</td></tr> <tr><td>Sodium Hydroxide 5%</td><td>No effect</td></tr> <tr><td>Ammonium Hydroxide 5%</td><td>No effect</td></tr> <tr><td>Sodium Hypochlorite (bleach)</td><td>No effect</td></tr> <tr><td>Ferric Chloride 1%</td><td>No effect</td></tr> <tr><td>Sulfuric Acid 20%</td><td>No effect</td></tr> <tr><td>Nitric Acid 1%</td><td>No effect</td></tr> <tr><td>Detergent Solution</td><td>No effect</td></tr> <tr><td>Gasoline</td><td>No effect</td></tr> <tr><td>Toluene</td><td>No effect</td></tr> </table> <p>ADHESION ASTM D4541 (psi)</p> <table border="0"> <tr><td>Cold Rolled Steel</td><td>>2,000</td></tr> <tr><td>Hot Rolled Steel</td><td>>2,000</td></tr> <tr><td>Cast Iron</td><td>>2,000</td></tr> <tr><td>304 Stainless Steel</td><td>>2,000</td></tr> <tr><td>316 Stainless Steel</td><td>>2,000</td></tr> <tr><td>Concrete</td><td>Concrete Failure</td></tr> </table>		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	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	<ul style="list-style-type: none"> • Prep substrate • 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 ensuring complete wet out of fabric. • Apply saturated fabric to wet primer ensuring a consistent, smooth wrap free of voids. • System must be post-cured @ 200°F for 24hrs and 1hr @ 300°F. • If exposed to sunlight, top coat the wrap with a light stable top coat. 	
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		NOTE																																	
		<p>The High Temp I Wrap System is intended as a short-term repair in critical applications and some long-term applications. I Wrap is not intended for applications with exposure to strong acids, organic acids, strong solvents (MEK, Acetone, Alcohol) or temperatures exceeding 350°F. To be applied by certified personnel only. See MSDS for additional safety information.</p>																																	
PERSONAL PROTECTION		KITS																																	
<p>INHALATION: Wear suitable respiratory cartridge mask in enclosed spaces. Work in well ventilated areas.</p> <p>EYES: Wear suitable goggles.</p> <p>SKIN: Wear protective clothing and gloves made of impervious material.</p> <p>STORAGE: Store away from direct sunlight and sources of heat. Store at 40° to 90°F (4° to 32°C). Avoid Freezing.</p>		<p>Kit Includes:</p> <ul style="list-style-type: none"> Two - Containers of Primer (A&B) Two - Containers of Wet Out (A&B) One - Carbon Fiber Fabric Two - Mixing Containers MSDS Installation Procedures 																																	
ORDER INFORMATION																																			
Part No. for standard kits consist of: Product Description Code - Kit Size - Pipe Style ex. SH-12-S																																			
Product Description Code	Kit Size		Pipe Style																																
SH – Standard I Wrap	4 – will wrap up to one 4” pipe	12 – will wrap up to one 12” pipe	S – Strait																																
HH – High Temp I Wrap	6 – will wrap up to one 6” pipe	16 – will wrap up to one 16” pipe	E – Elbow																																
AH – Acid Resistant I Wrap	8 – will wrap up to one 8” pipe	24 – will wrap up to one 24” pipe	T – Tee																																
	10 – will wrap up to one 10” pipe		SS – Spool																																
<p>*** NOTE: Custom kits can be designed for any line size, style or application. ***</p>																																			