



CORROPIPE® PW ULTRA

TECHNICAL DATA

ULTRA HIGH DESIGN LINING FOR POTABLE WATER PIPELINES

THE PRODUCT AND ITS USES

CorroPipe® PW ULTRA is the ultimate potable water coating which combines familiar handling characteristics with performance attributes that ensure a design life of 100 years or more. Several long term written warranties, including a 20-year product replacement warranty, are available with this product. In addition to all the other properties normally associated with Madison's potable water coatings, CorroPipe® PW ULTRA offers physical properties that set the "Gold Standard" of the industry in terms of adhesion (including wet adhesion), perm rating, water absorption, impact resistance and resistance to cathodic disbondment. When applied, it achieves its adhesion quickly, enabling the applicator to coat, inspect and ship pipe in the same shift. The familiar toughness associated with the CorroPipe® name makes it ideal for both interior applications (e.g. abrasive slurries, raw water etc.) and exterior (including rock shield, slip bore and directional drill applications).

This product is applied with familiar plural component spray equipment. Two setting times are available; a one minute version for in-plant production and a five minute version for in-situ convenience. The formulation contains Madison NanoShield™, a form of ceramic nanospheres that enhance the already high abrasion resistance of this product. It also contains MicroSpear™, Madison's exclusive permanent anti-microbial additive guaranteed to last for the life of the coating system.

TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	-040C(-40°F) to 65°C (150°F)
Initial Setting Time	@20°C/70°F	1 minute (snap set); 5 minutes (fast set)
Curing Time Before Handling	@20°C/70°F	5 minutes (snap set); 15 minutes (fast set)
Ultimate Cure	@20°C/70°F	7 days
Recoat Time*	@20°C/70°F	Within 30 minutes (snap set); within 1 hour (fast set)
Solids Content	ASTM D-1259	100%
Volatile Organic Compounds (VOC's)	ASTM D-2369	0 grams/litre
Theoretical Coverage	N/A	1604 ft ² /US gal/mil; 1016 m ² /litre/micron
Adhesion to Steel	ASTM D-4541 (SSPC-10)	4 hour: - 1,800 ± 200 p.s.i.; 24 hour: - => 3,000 p.s.i.
Hardness	ASTM D-2240 Shore D	75 +/- 5
Flexibility	ASTM D-522	180° over 3" mandrel
Abrasion Resistance	ASTM D-4060 (CS-17 Taber tester)	30 to 35
Resistance to Cathodic Disbondment	CSA Z225 (65°C, 48 hours, 20mils)	< 5 mm average results
Chemical Resistance	ASTM D-543	Excellent; See Chemical Resistance Chart
Dielectric Strength	ASTM D-149	Greater than 200 volts per mil
Surface Resistivity	ASTM D-257	1 x 10 ¹⁴ ohms per cm ²
Impact Resistance	ASTM D-2794 (20 mils)	Excellent; 140 in. lbs ± 15 in. lbs.
Accelerated Weathering	ASTM G-154 (25 hours)	No cracking; some chalking & darkening
Permeability	ASTM E-96	0.02 metric perms
Water Absorption	ASTM D-570	< 1.5 %
Wet Adhesion	ASTM D-870	Pass (no blistering, softening or embrittlement ; Retains 85 % of dry adhesion (± 5%)
Colours		Consult Madison Representative

*However, recoat window varies depending on ambient and substrate temperatures and coating thickness.

NOTE: All statements, technical information and recommendations contained herein are typical of results obtained under laboratory conditions and are not intended to be used as contract specifications. For specification guidelines please contact Madison Chemical. The information contained herein is believed to be accurate as of date of publication. Madison reserves the right to change product specifications without notice.

APPLICATION INSTRUCTIONS

CONTACT MADISON FOR DETAILED [APPLICATION INSTRUCTION BULLETIN](#) (ALSO AVAILABLE ONLINE).

A. SURFACE PREPARATION

- 1) Ensure that surface is clean, dry and uncontaminated. Proceed only if the substrate temperature is more than 3°C(5°F) above the dew point temperature during surface preparation and coating application.
- 2) Abrasive blast clean with angular media (sand, slag or steel grit G40 or coarser). DO NOT USE steel shot or other non-angular media.
For **steel** surfaces, blast to a Near White Blast (SSPC-SP10; NACE 2; SA 2.5):
 - minimum 3.0 mil (75 microns) profile for immersion;
 - minimum 2.5 mil (65 microns) profile for buried / embedded service;
 - for atmospheric service, the expense of blasting can be avoided by applying Madison FerroGrip™ Surface Conditioner / Adhesion Promoter immediately prior to application of coating; blasting is an optional alternative.For **ductile iron** surfaces, abrasive blast to achieve a surface anchor profile of 2.5 mils or greater. Remove all rust and loose oxides.
For **concrete** surfaces, abrasive blast for immersion conditions, or simply apply FerroGrip™ in all other cases.

B. APPLICATION OF COATING

- 1) Agitate individual components thoroughly before use to disperse pigments and assure homogeneity. Do not thin. Do not mix 'A' and 'B' together.
- 2) Spray apply CorroPipe® PW ULTRA using a plural component, 1:1 mix ratio, heated airless spray unit.
- 3) Unlimited film thickness can be obtained in one continuous coating operation, using one of several techniques. Contact Madison for detailed instructions.
- 4) For coating on a conveyor line, a uniform pipe temperature of between 20°C(70°F) and 55°C(120°F) is required to enable the coating to cure quickly.
- 5) A second coat may be applied over the first, so long as it is applied within the recoat window. Otherwise, it will be necessary to roughen the surface to ensure good intercoat adhesion. Let coating reach full cure before putting into service. Then follow pipe decontamination procedure to remove any dirt and debris.

C. CLEAN-UP AND STORAGE

- 1) This material will react with humidity and moisture. Keep containers tightly sealed and store upside down. For clean-up, use Madison VR-1 Viscosity Reducer™. Other solvents may react with the product.
- 2) Store between 10°C(50°F) and 27°C(80°F). DO NOT FREEZE. Use product within 6 months of receiving.

HEALTH AND SAFETY

CorroPipe® PW ULTRA is intended for industrial or professional use only. It contains no monomeric isocyanates but may nevertheless cause respiratory distress in some people. Provide ample ventilation in confined areas. Wear a NIOSH-approved cartridge-type face mask or a fresh air respirator in spray area. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician for instructions. Protect skin by wearing rubber gloves, safety goggles and protective clothing. If splashed on skin, remove immediately with rubbing alcohol or a Madison Reducer (VR-1, VR-2 or VR-4) and then wash with soap and water, as product is difficult to remove when cured. If splashed in eyes, wash liberally with clean water and contact physician; temporary irritation of eyes may last several days. See MSDS for more information. The finished product is totally inert and harmless. Review [Application Instruction Bulletin](#) for additional safety information.

BASIC AND LONG TERM WARRANTIES

Warranties of up to 20 years duration are available with regard to this product. Please refer to Warranty Information Bulletin (available on-line or from your Madison representative). Actual warranty wording is available to owners who express interest in this protection. All warranties are backed up with product liability insurance and an annual premium is applicable.

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