



Protective Coatings for Utility Structures Product Selector Guide

MADISON CHEMICAL INDUSTRIES INC.

The Technology Leader for Infrastructural Coatings™

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WELCOME TO MADISON CHEMICAL

Madison Chemical Industries is a technology leader in the development and marketing of "Infrastructural Coatings"[™]: - ultra high performance coatings that protects and preserves the infrastructure upon which our society depends. With over 35 years of experience on four continents, Madison has evolved into a mainstream supplier to many industries including all aspects of the storage, transmission and processing of both potable water and wastewater.

From our roots supplying coatings to North America's largest manufacturers of storage tanks and water/wastewater pipe, Madison has established a reputation with specifiers and municipalities for the protection and preservation of structures of all types, whether shop fabricated or field erected.

If you are involved in the protection of water purification facilities, waste treatment plants, secondary containment and similar municipally-owned or privately owned facilities, Madison has the products and services necessary to provide you with long-term solutions for your unique corrosion prevention challenges.

TECHNOLOGY LEADERS

We are a technology leader all the way, with over three decades of breakthroughs:

- 1973 - First polyurethane tank coatings
- 1982 - First polyurethane pipeline coatings
- 1989 - First polyurethane lining to receive NSF listing for potable water service
- 1998 - Permanent Anti-Microbial (AM) MicroSpear[™] Technology
- 2001 - Ceramic (CM) polyurethanes for highly abrasive conditions
- 2008 - Three new, multi-purpose metal coating systems

TECHNICAL AND PROJECT SERVICES

Our technical service specialists are highly trained and are NACE certified. We recruit a skilled network of independent applicators to guarantee superior product performance. To become a Madison Approved Applicator, a coating contractor must undergo rigorous training to ensure that they are experts in surface preparation, product application, equipment service, spray techniques and troubleshooting. Every member of our in-house technical service team has years of experience, so outstanding support is just a phone call away.

PERFORMANCE

Unrivalled handling and performance characteristics allow Madison's coating products to meet the demands of an credible array of applications. A wide variety of coatings are available for virtually every kind of substrate encountered in the water and wastewater industry, including steel, ductile iron and concrete. Many of Madison's coatings achieve adhesion in excess of 2,000 p.s.i., more than twice that of the competition. Coated surfaces are so smooth that the coefficient friction rivals that of polyethylene. Impact resistance values compare to the best in the industry. Chemical resistance is proven by 30 years of real-world experience and hundreds of long-term laboratory immersion tests.

Some of the leading edge handling characteristics you can expect from Madison include (1):

- Curing at virtually any temperature, winter and summer
- Non-flammable, solvent free and intrinsically safe
- Self-priming direct to metal systems
- Application in a single multi-pass coat
- Setting times from seconds to hours
- Return to service in hours
- Easy touch-up and repair
- D.O.T. rated as "non-hazardous"

Important performance advantages include:

- Superior adhesion
- Resistance to chemical attack
- Resistance to gouging and abrasion
- Flexibility and resilience to embrittlement
- Inert when cured; no risk of 'tainting' water supply
- Impermeability
- Resistance to disbondment and undercutting
- Several national and international approvals
- Special versions with anti-microbial and/or ceramic modified modifications for additional performance protection

QUALITY

Madison products are designed to last for decades, even in the most aggressive environments, and we have the case studies and technical data to prove it. In addition to numerous approvals from 3rd party tests, UL, AWWA and NSF, we are also an ISO 9001:2008 certified facility.

At Madison we don't simply manufacture and ship coating products. We provide a complete package of coating services designed to satisfy the expectations of our customers. We go beyond the norm to provide our customers with quality, service, and innovation.

(1) Not all the above features apply to every product.

Application	Substrate	Service Requirement	Basecoat/ Primer	Maincoat/ Topcoat	Total DFT Target (mils)	Surface Prep'n	Description
Embedded and Immersion Service	Galvanized Steel and Weathering Steel	Basic Performance (light to moderate duty)	NA	CorroCote II Classic	20	GalvaGrip Surface Conditioner Or SSPC-SP7	Fast set, plural component option for a wide variety of service conditions.
			NA	CorroCote 'S'	20	GalvaGrip Or SSPC-SP7	Easy to use, mix and apply format for light to moderate duty general use
		Moderate to Heavy Duty	NA	GalvaClad Aromatic	25-30	GalvaGrip Or SSPC-SP7	Contains AP-50 Adhesion Promoter for excellent adhesion. AM and CM available.
		Heavy to Severe Duty	NA	GalvaClad II Ultra	25-30	GalvaGrip Or SSPC-SP7	Highest performance and surface tolerance. Contains premium resins and AP-50 Adhesion Promoter for superior adhesion. AM and CM available.
Atmospheric Service	Galvanized Steel and Weathering Steel	Basic Performance (light to moderate duty)	NA	AcrylaThane 55 or 5200	8-12	GalvaGrip Or SSPC-SP7	Mix and apply, paint-like, solvent borne. AcrylaThane 5200 contains aircraft-grade resins for excellent UV resistance. AcrylaThane 55 gives good UV protection at a lower price.
			Moderate to Heavy Duty	GalvaClad Liquid Zinc 3-5 mils	AcrylaThane 55 or 5200 1or 2 coats @ 3-5 mils each NOTE: if a topcoat is not required, a second coat of Liquid Zinc may be applied	6-10 mils Or 9-15 mils	GalvaGrip Or SSPC-SP7
		Heavy to Severe Duty	NA	GalvaClad Aliphatic	25-30	GalvaGrip Or SSPC-SP7	The world's only fast setting 100% solids aliphatic polyurethane for atmospheric service. Design life of 50 years at higher film thickness.
			GalvaClad Aromatic 25 mils	AcrylaThane 55(CM) or 5200(CM) - 5 mils	30	GalvaGrip Or SSPC-SP7	'Never Go Back To Bare Metal' Designed for maximum service. For 100 year design life, a refresher topcoat every 20 years is required.

PRODUCT AND TECHNOLOGY DESCRIPTIONS

AcrylaThane®: Aliphatic polyurethane topcoats (55 and 5200) designed for color and gloss stability.

'MicroSpear' AM (Anti-Microbial) Technology: a proprietary, permanent ant-microbial modification. Suitable for use in all water immersion applications for prevention of microbial induced corrosion (MIC).

CorroCote®: A family of high performance polyurethane coatings; primarily 1:1 fast set, high build coatings (Classic) and some slower setting, paint-like products ('S').

GalvaGrip: A proprietary surface conditioner/adhesion-enhancing compound for galvanized surfaces.

GalvaClad Aromatic: A multi-purpose 100% solids, 1:1 fast set polyurethane protective coating.

GalvaClad Aliphatic: Similar to GalvaClad Aromatic, with premium resins for color and gloss stability.

GalvaClad Liquid Zinc: A versatile, user friendly, surface tolerant primer/repair coating.

GalvaClad II Ultra: A high performance 100% solids, 1:1 fast set polyurethane for severe service.

NanoShield CM (Ceramic Modification): Ceramic microspheres providing the highest level of abrasion resistance.

SSPC-SP7: Brush Blasting designed to provide some surface profiling on galvanized steel, without damaging the zinc finish.

NOTE: For more detailed descriptions of these products, refer to the Technical Data Sheets.

GENERAL COMMENTS

Always use angular mineral abrasives or steel grit for blasting, never shot. Synthetic grit or slag-based abrasives may cause contamination of surface and must be used with extreme caution. 24 to 32 grit size recommended.

With all systems, "fogging" one or two mils on corners and edges improves performance.

1 mil equals .001 inches and is approximately equal to 25 microns.

This Product Selector Guide is not intended to be definitive.

In some cases a clear choice may not be immediately obvious, or more than one option is available. Detailed technical data sheets, specifications and application instructions are available to assist in choosing a suitable system, or contact a Madison representative for further guidance in making your selection.

Information contained in this publication is accurate to the best knowledge and belief of Madison Chemical Industries Inc. Any information or advice obtained from Madison is also given in good faith but it remains at all times the responsibility of the customer to ensure that the materials are suitable for the purpose intended. Published technical data and instructions are subject to change without notice.

March 2010