



BULLETIN

MADISON CHEMICAL INDUSTRIES INC.

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Joint Coatings for Pipe

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Introduction

Madison offers the broadest range of pipeline joint coatings available on the market today. Joint coatings are protective coating products used in the field to coat externally or line internally the welded joints on steel transmission pipe.

Types of Products Available

Joint Coatings are mostly medium-bodied hand-applied products which can be applied by brush, roller or spray (some thinning may be required). The intent is that they can be applied in one or two coats in areas ranging from a few square feet to several hundred square feet at thicknesses of about 12 to 20 mils, depending on the specific product and the ambient conditions such as substrate temperatures. There is one viscosity exception, MG-125, which is extra thick for reasons set out below. Madison Joint Coatings are all in a mix-and-apply format. If you are doing very small areas and prefer the convenience of a single component self-curing format and if setting time is not important, you may wish to use a touch-up material instead of a joint coating. See InfoTech Bulletin No. 1 for details.

Further in this document we will discuss the specific alternatives available and will distinguish them in such a way that the end-user can make his or her decision as to the best alternative. One thing to keep in mind is that, for joint coating purposes, it is often a viable alternative to use the "parent material", i.e. the coating with which the main body of the pipe has previously been coated.

There are two tables on pages 2 and 3. The first lists Madison's joint coating materials, describes each one in some detail and helps the reader to distinguish one from another. Table No. 2 acts as a basic product selector guide for these materials. It describes some typical applications and suggests the most appropriate joint coating.

**TABLE 1
PRODUCT NAMES AND ATTRIBUTES OF JOINT COATING MATERIALS**

PRODUCT NAME	ATTRIBUTES
MG-120	<ul style="list-style-type: none"> • Mix-and-Apply 2:1 format • Bisphenol A type epoxy, amine cured • 100% solids (no solvents), non flammable • Apply direct to substrate in one or two coats • 10-12 mils per coat (two coats required) • Cures to an enamel-like finish • Apply by brush, roller or spray pump (may need to be reduced by about 10% for spraying; pot life 45 to 60 minutes) • Cures at 10°C (50°F) or higher • Versatile overall performer
MG-125	<ul style="list-style-type: none"> • Same technology as MG-120 but with a higher viscosity • Trowel apply to thicknesses up to 35 mils; permits extra high build in a single coat
CorroPipe "S"	<ul style="list-style-type: none"> • "Single-component-plus-catalyst" format • Pure polyurethane • Contains some solvents (72% solids) • Easily spray-able (very paint-like to use) • Cures in cold weather (down to -15°C (5°F)) • Excellent chemical resistance
CorroPipe II PW CorroPipe UltraLiner CorroClad 2000 CorroPipe II Omni CorroPipe II TX-15	<ul style="list-style-type: none"> • The same products that have been specified for the main pipe can be used for joints. Must be sprayed with plural component equipment. Use on larger projects.

**TABLE 2
TYPICAL APPLICATIONS FOR MADISON JOINT COATING PRODUCTS**

TYPICAL APPLICATION	RECOMMENDED JOINT COATING
Interior or exterior application on large projects involving many joints, particularly where fast throughput or very cold temperature is a concern	Where access permits, use the same plural component coating as was applied in the factory for the main body of the pipe such as CorroPipe II PW, CorroPipe II UltraLiner, CorroPipe II Omni, CorroPipe II TX-15 or CorroClad 2000 (all of which will set at virtually any ambient temperature)
Interior of potable water pipe (where main factory-applied coating is usually CorroPipe II PW or possibly MG-120 for small quantity of pipes or fittings)	<ul style="list-style-type: none"> • Use MG-120 for most applications
Interior of normal municipal wastewater pipe (where main factory-applied coating is usually CorroPipe II WasteLiner, MG-120 or CorroPipe "S" on smaller projects)	<ul style="list-style-type: none"> • Use MG-120 for most applications • Use MG-125 for higher per-coat application • Use CorroPipe II Joint Coating (E) when the application temperature is closer to or lower than 10°C (50°F) or if application conditions may be more humid • CorroPipe "S" may be used but will require more coats
Interior of effluent or industrial wastewater pipe (where main coating is usually CorroPipe II UltraLiner)	CorroPipe "S"
Interior, general purpose	Any of the above
Exterior applications	Any of the above
Cold temperature applications	CorroPipe "S" down to -10° C (15° F) or use plural component technology down to -45° C (-50° F)

Refer to individual technical data sheets for additional information on the products located in this bulletin.