



MG 120

TECHNICAL DATA

PROTECTIVE HIGH PERFORMANCE COATING

THE PRODUCT AND ITS USES

MG 120 is two component, 2:1 ratio, high gloss, slow setting, 100% solids (No VOC), epoxy-polyurethane hybrid coating for infrastructural applications of all types. MG 120 is suitable wherever high performance and ease of use are equally important; for example, girth weld pipeline repairs, pipe joint repairs, valve linings, wastewater treatment applications, ballast and storage tank linings. Properly applied, MG 120 will provide a pinhole-free, monolithic barrier which completely protects the parent structure, whether metal or concrete. The finished product offers excellent resistance to corrosion, abrasion and cathodic disbondment, combined with good chemical resistance. Viscosity is sprayable. For thicker build, consider MG125, which provides similar protection in a trowel-grade format.

APPROVALS AND LISTINGS

UL Water Quality Certified in accordance with NSF/ANSI Standard 61.



TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	10°C (50°F) to 65°C (150°F)
Initial Set Time	@ 25°C (77°F)	5 hours
Pot Life	@ 25°C (77°F)	within 1 hour
Recoat Time*	@ 25°C (77°F)	minimum recoat time 6 hours maximum recoat time 48 hours
Ultimate Cure Time	@ 25°C (77°F)	7 days
Solids Content	Conversion to Solids by Volume	100%
Volatile Organic Compounds (VOCs)	ASTM D2369	0 grams/litre
Theoretical Coverage	N/A	40 m ² /litre/25 micron (1604 ft ² /US gallon/mil)
Hardness	ASTM D-2240 Shore D	80
Adhesion to Concrete		Greater than the Cohesive Strength of Concrete
Adhesion to Steel	ASTM D-4541 (SSPC SP-10)	>2000 psi
Resistance to Cathodic Disbondment	CSA Z-245 (65 °C, 48 hours, 20 mils)	<10 mm average radius
Dielectric Strength	ASTM D-1000 @ 23°C (73°F)	>200 volts/mil
Abrasion Resistance	ASTM D-4060 (Taber CS-17, 1kg, 1000 cycles)	100 mg
Impact Resistance	ASTM D2794	50 inch-pounds
Colors		Available in white, off-white, gray & black Will chalk and darken

*However, recoat window varies depending on the spray equipment temperature setting, the ambient conditions, product temperature/thickness, and the temperature of the substrate being coated.

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.

APPLICATION INSTRUCTIONS

CONTACT MADISON FOR DETAILED APPLICATION INSTRUCTIONS.

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 sand or grit (G40 or coarser). DO NOT USE steel shot or non-angular media.
For **steel** surfaces, blast to a Near White Blast (SSPC-SP10; NACE 2; SA 2.5), finishing with a:
 - minimum 3.0 mil (75 microns) profile for immersion;
 - minimum 2.5 mil (65 microns) profile for buried;
 - minimum 2.0 mil (50 microns) profile for atmospheric service.When this is not feasible for field application, we recommend the steel is preblasted in the shop. Once in the field, the surface is reblasted or cleaned with a power hand tool to achieve an angular pattern with a minimum depth profile of 2.5 mil (65 microns). For immersion service, the steel surface must be blasted.
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 to remove any laticence. Ensure there are no visible bug holes on the surface. If so, patch to fill the holes using suitable materials.
- 3) See Madison Application Instructions for details.

B. APPLICATION OF COATING

- 1) Do not apply if temperature is below 10°C (50°F) or if the dewpoint is within 3°C (5°F) of the temperature. All application and surface preparation should be consistent with good painting practices.
- 2) This is a two component system with a 2:1 mix ratio by volume. Agitate individual components thoroughly before use to disperse pigments and assure homogeneity. All components (Part A Resin and Part B Hardener) should be between 21°C (70°F) and 32°C (90°F) prior to mixing.
- 3) Pour Part B Hardener into Part A Resin and blend thoroughly using a power agitator, such as a Jiffy mixer and a high strength industrial drill, for 3-5 minutes. To ensure complete mixing, scrape sides and bottom of containers. Incomplete mixing will result in soft spots or colour variation. Begin application immediately after mixing. MG 120 may be thinned using Madison VR-4 Reducer to a maximum of 30% by volume.
- 4) MG 120 may be applied using a brush, 1/4" or 3/8" nap phenolic core roller, squeegee, or airless spray. When using airless spray it is recommended to use a 45:1 ratio pump, 0.023" - 0.027" orifice tip, and a 3/8" material hose unless more than 50 ft. is required, then use a 1/2" material hose. The total application thickness may vary, depending on expected service conditions (i.e., chemical exposure, temperature, traffic load and other mechanical abuse, immersion service vs. splash-spill, etc.).
- 5) A second coat may be applied over the first, so long as it is applied within the recoat window. Otherwise, roughening of the surface will be necessary to ensure good intercoat adhesion.
- 6) Allow coating to cure completely before putting into service.

C. CLEAN-UP AND STORAGE

Use Madison's VR-4 Reducer, acetone, or other ketone solvents. Store closed container in a cool, dry area. Use product within 12 months of receiving.

HEALTH AND SAFETY

MG 120 is intended for industrial use only. Provide ample ventilation. Wear a NIOSH approved respirator suitable for organic vapor if necessary. Wear rubber gloves, safety goggles and protective clothing. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician. If splashed on skin, remove immediately with rubbing alcohol and then wash with soap and water. 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 completely inert.

LIMITED TWO YEAR WARRANTY

Madison will replace any product which, in service for which it is suitable, fails to meet specifications within two years of sale and which is proven to be defective when applied according to instructions by a Madison Approved Applicator or Certified OEM Applicator. Madison accepts no responsibility or liability for any other loss, claim, damage, injury or expense, direct or consequential, in contract or negligence. This product replacement warranty is in lieu of any other right, warranty, guarantee or condition, statutory or otherwise, expressed or implied, whether as to fitness for a particular purpose or as to merchantable quality or otherwise.

The information contained herein is believed to be accurate as of the date of publication. Madison reserves the right to change product specifications without notice.

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