

Madewell® 1103

Epoxy Coal Tar Coating



FEATURES/BENEFITS

PERMANENT FLEXIBILITY	SUNLIGHT/ULTRAVIOLET RESISTANCE
TEMPERATURE RESISTANCE IN IMMERSION	ABRASION RESISTANT
SUPERIOR CHEMICAL RESISTANCE	100% SOLIDS
IMPACT RESISTANT	HIGH BUILD
EXCELLENT ADHESION	LOW TEMPERATURE/HIGH MOISTURE CURE

PRODUCT DESCRIPTION

MADEWELL® 1103, A 100% solids, chemically modified epoxy coal tar coating, represents a major breakthrough in the performance of epoxy coal tar systems. Its unique, multicomponent curing system contributes to a number of superior properties: toughness, permanent flexibility, and improved chemical and temperature resistance. This sprayable system may be applied in thickness up to 40 mils or more in a single application, which reduces application costs. The absence of solvent reduces shrinkage, cracking and disbonding and eliminates the problems related to solvent entrapment. The system remains quite flexible when mixed with select siliceous fillers (up to 100% by weight). **MADWELL 1103** cures relatively fast at 40° F and under high moisture conditions – even under water. This property enables field applications under a variety of weather conditions resulting in minimum downtime. **MADWELL 1103** exhibits superior ultraviolet and sunlight resistance after years of exposure. Common chalking, checking, and embrittlement problems associated with traditional epoxy coal tar systems are not present with this system.

MADWELL 1103 meets the requirements of:

- The U.S. Environmental Protection Agency's extractables protocol for coatings to be used in potable water service.
- The American Society for Testing and Materials (ASTM) Specification C-541.
- Performance criteria for the American Water Works Association Specification C-210.

PRODUCT DATA

COMPOSITION:

100% Solids, modified epoxy coal tar coating.

AVAILABLE COLORS:

Black or red.

THICKNESS:

20 to 125 mils (0.5 to 3.0 mm). Consult with a Madewell Technical Service Representative for specific recommendations.

COVERAGE:

80 ft² per gallon at 20 mils, theoretical. Allowances must be made for waste and shrinkage due to crosslinking.

PACKAGING:

Normally stocked in 50 lb. two component kits (approximately 4.5 gal. per

kit). Larger and smaller kit sizes available on special order.

SURFACE PREPARATION:

Steel: Apply only to clean surfaces. All metal surfaces should be inspected prior to blast cleaning and degreased or otherwise decontaminated as required. New steel should be abrasive blast cleaned to a Commercial Blast condition in accordance with NACE TM-01-70 No. 3 or SSPC SP-6, 63 or pickled in accordance with SSPC SP-8, 63. Anchor pattern depth should be selected to fit the application, however, a 2 to 4 mil profile is suitable in most cases.

Concrete and Other Cementitious Surfaces: Concrete surfaces to be coated

shall be free of laitance, grease, oil, and all other foreign materials. If required, the surfaces may be cleaned by sandblasting or other suitable mechanical means. Etching with muriatic acid may also be used to clean the surface, provided, however, that it is thoroughly broomed and flushed with a spray of fresh water to remove all salts. Surfaces need not be completely dry but should be free of standing or flowing water when **MADWELL 1103** is applied. If surfaces are extremely porous, weak or deteriorated, **MADWELL 927** Primer should be used to penetrate, seal and strengthen the surface prior to coating. See descriptive brochure. Rough or deteriorated concrete should be smoothed and/or re-

paired using either **MAINSTAY ML-72** Sprayable Microsilica Mortar or **MADWELL 1312P** Thixotropic Epoxy Putty. Refer to the applicable descriptive brochure for surface preparation and application instructions.

MIXING RATIO:

Mix components at a weight ratio of 3 parts A to 7 part B.

POT LIFE:

Approximately 45 minutes at 100° F. Pot life will be extended at lower temperatures and shortened when higher.

THINNING:

Thinning is not recommended for top-coats. Use **MADWELL 457** Thinner for equipment cleanup (see descriptive brochure).

PRIMING:

Not necessarily required for steel surfaces. However, product may be thinned 10% to 15% by volume with **MADWELL 457** Thinner and applied as a primer for certain purposes (such as holding a blast condition or to promote wetting out of the surface in cool weather). Consult a Madewell Technical Service Representative for procedures particular to your application. Concrete surfaces may be primed with **MADWELL 927** Penetrating Epoxy Primer/Sealer – see descriptive brochure for application and surface preparation details.

APPLICATION:

This product is to be applied by trained workmen using specialized equipment. Both components must be preheated to 100° F prior to application. A 45:1 airless spray pump with an air input pressure of ~90 PSI is used to feed material through up to 50' of 1/2" diameter hose to a standard airless spray gun with a

0.031" to 0.035" reversible tip. It is recommended that 60 mesh in line strainers/filters be used. Other equipment, such as whip hoses, heaters or plural component equipment may be employed. Contact a Madewell Technical Service Representative for specific equipment recommendations and sources.

NUMBER OF COATS:

Depends on service requirements. Generally speaking, linings or coatings for immersion service should be holiday free. The number of coats required to attain a holiday free lining or coating may vary depending on surface profile or roughness. Single coat applications should be done in multiple passes, each made at right angles to the last.

CURE TIME:

To handle – 36 hours at 70° F. Chemical or immersion service – 24 hours to 7 days, depending on temperature. If desired, or for certain chemical or high temperature applications, force curing for 8 hours at 140° F or higher may be employed. Contact a Madewell Technical Service Representative for specific recommendations.

CLEAN UP:

MADWELL 457 Thinner is recommended to clean equipment (see descriptive brochure). Skin should be cleaned using warm soapy water or commercial hand cleaner.

STORAGE:

Store components in sealed containers in dry environment at moderate temperature conditions (< 80° F).

SHELF LIFE:

1 year, subject to reinspection thereafter.

SAFETY:

MADWELL 1103 contains epoxy resins that *MAY CAUSE EYE OR SKIN SENSITIZATION*. Adequate health and safety precautions should be observed during all storage, handling, use and drying periods. For best results and safest usage, user is specifically directed to consult the current "Material Safety Data Sheet" for this product. When using this product in a confined space or closed area, consult the current OSHA or ANSI bulletins on safety requirements. Do not take internally. If swallowed, call a physician immediately. Keep away from open flame and keep containers tightly closed when not in use.

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