REMR Material Data Sheet CM-SE-1.42
CONCRETE SEALER: BITUMASTIC 300-M

1. NAME

Bitumastic 300-M

2. MANUFACTURER

Kop-Coat, Inc.
Pittsburgh, PA 15219
Telephone: 412-227-2700

3. DESCRIPTION

Bitumastic 300-M is a two-component, self-priming, chemically-cured catalyzed coal tar epoxy protective coating.

4. USES & LIMITATIONS

Uses: Bitumastic No. 300-M is designed for immersion, interior or exterior exposures. It combines the outstanding corrosion resistance characteristics of selected coal tar pitch with those of epoxy resin.

Limitations: Do not use Bitumastic No. 300-M for the interior dead end, stagnant or very low flow lines.

5. MANUFACTURER'S TECHNICAL DATA

Volume solids: 74%

Theoretical coverage: 1,184 mil sq ft/gal

Coverage to achieve minimum dry film thickness: 90 to 115 sq ft/gal per coat (allows for approximately 20 percent application loss) on smooth surfaces. Actual coverage will depend on surface porosity and profile.

Film build ratio: 8 to 10 dry mils (11 to 14 wet mils) per coat. Required minimum dry film thickness shall not be less than 16 mils. Dry films in excess of 40 dry mils are recommended.

Dry time at 70 °F and 50% rh: To touch: 3 to 4 hr

Between coats: Overnight to 24 hr. Faster between-coat applications are possible. Surfaces exposed to the sun and heated to temperatures over 70 °F should be given another coat as soon as the previous coat is solvent-free (but not less than a minimum 2 hr). If an inline heater is used when spraying (See Spray Data Section), dry time between coats can be reduced to approximately 3 hr. If drying time prior to recoating exceeds 24 hr at temperatures above 70 °F, the dry coating must be brush-sandblasted, or Bitumastic 2 CB must be used to pretreat the coating surface (see Bitumastic 2 CB Technical Data Sheet available from manufacturer). Do not add Bitumastic 2 CB to Bitumastic No. 300-M.

Before submerging: All chemically-cured coatings require a long curing time to reach maximum chemical resistance. For best results, a minimum curing time of five days at temperatures between 70 and 100 °F is essential before placing in service.

Mixing ratio by volume: Component A - 4 parts, Component B - 1 part.

Pot life after mixing: At 50 °F - 10 hr; at 60 °F - 6 hr; at 80 °F - 2 hr; at 100 °F - 1 hr.

Temperature limitations: Dry: 250 °F. Wet: 120 °F maximum continuous.

Storage life: One year minimum - some moderate bodying of Component A will occur after 6 months of storage at 70 °F. High shear or high speed agitation will normally return Component A - to its original viscosity. Up to 1 pt Koppers Thinner 2000 per 5 gal of coating may be added if necessary.

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Surface preparation: All bare or primed or previously painted surfaces must be dry and free of oil, dirt, loose particles and all other foreign matter.

Experience over many years confirms that the fundamental factor for a quality job is proper surface preparation. Unless the surface is properly prepared, there is no point in using the better coatings.

For application to concrete, all curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be clean and thoroughly dry before coating. Unpainted concrete floors or concrete that will be submerged must be etched with a 15 to 20 percent muriatic acid solution or brush blasted to achieve a profile similar to medium grade sandpaper. Cast concrete surfaces should be brush-sandblasted to open bugholes and to roughen the surface.

Applications: The first coat must be thinned; add one part Thinner 2000 to two parts Bitumastic No. 300-M and apply at the rate of 200 to 300 sq ft per gal. Allow not more than 24 hr before applying additional coats of Bitumastic No. 300-M at the normal unthinned rate.

Note: In areas where high water table exist, internally coated concrete pipe that is to be buried may also require external coating if the pipe cannot withstand hydrostatic pressure testing.

Mixing instructions: Mechanically agitate Component A thoroughly. Continue mixing Component A and slowly add Component B to Component A. Mechanically agitate vigorously for two minutes. Pour some of the mixed material back into the Component B can and stir to insure that all of Component B is in solution; then return material to Component A can. Mechanically agitate vigorously for at least two minutes. If proportioning equipment is used, agitate Component A as above. (Note: Both Components A & B will thicken in viscosity when cold. The material should be warmed to room temperature before mixing for best results.)

Methods of application: Brush, roller, heavy duty conventional or airless spray can be used. Avoid the use of nylon or plastic equipment. Do not apply to surfaces that will be exposed to rain before the coating is dry or on surfaces with temperatures below 50 °F.

All quality coatings require top grade workmanship and a good knowledge of the materials and systems of application. Special equipment, other than application equipment should be utilized for top quality results such as wet-film-thickness gauge, dry-film gauge, low-voltage holiday detector, and moisture meter (for concrete, masonry, and wood substrates).

Application notes: Application of the coating to surfaces that are warmer than 90 °F may result in "dimpling" of the film. Surface finish of the

coating at high film thickness will depend on quality of atomization.

Caution: Bitumastic 300-M is harmful or fatal if swallowed; its vapor is harmful. It is a skin and eye irritant and may sensitize skin to sunlight.

Keep away from heat, sparks and flame. Avoid breathing vapor or spray mist. Avoid contact with eyes and skin. Use an ultraviolet barrier cream on exposed skin. Wash thoroughly after handling.

Keep closures tight and upright to prevent leakage. Keep container closed when not in use. Absorb and dispose of spillage in accordance with local applicable regulations. Do not take internally.

7. CORPS OF ENGINEERS' EVALUATION (tested as concrete sealers only)

Physical and mechanical properties:

Percent solid
(ASTM D 1644, Method A): 85.0%

Percent moisture absorption
(ambient temp) (ASTM C 642-82):

1 day	0.02%
2 days	0.04%
4 days	0.05%
7 days	0.07%

Ratio of percent moisture absorption for treated to nontreated specimen
(2-day submersion): 0.85%

Percent vapor transmittance (see REMR Technical Note CS-ES-1.8):

2 days	0.03%
4 days	0.05%
7 days	0.06%

Ratio of percent vapor transmittance for treated to nontreated specimen
(2-day diffusion): 1.12%

8. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of activities involving potentially hazardous and toxic chemical substances. Manufacturer's recommendations to protect occupational health and environmental quality should be carefully followed. Material safety data sheets must be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.