

SECTION 071113 BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hot-applied asphalt dampproofing.
 - 2. Cold-applied, cut-back asphalt dampproofing.
 - 3. Cold-applied, emulsified-asphalt dampproofing.
- B. Related Sections:
 - 1. Section 011813 – Sustainable Design Requirements for LEED requirements.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for method of application, primer, number of coats, coverage or thickness, and protection course.
- B. Material Certificates: For each product, signed by manufacturers.
- C. LEED Submittals:
 - 1. Credit EQ 4.2: Product Data for dampproofing used on interior of building indicating VOC content in g/L calculated per 40 CFR 59, Subpart D (EPA Method 24).

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain primary dampproofing materials and primers through one source from a single manufacturer. Provide secondary materials recommended by 1 of primary materials.

1.4 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit dampproofing to be performed per manufacturers' written instructions.
- B. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has cured.

PART 2 - PRODUCTS

2.1 HOT-APPLIED ASPHALT DAMPPROOFING

- A. Hot-Applied Asphalt Dampproofing: ASTM D449, Type [I] [II] [III].
- B. VOC Content: **[2.5 pounds per gallon] [4.2 pounds per gallon]** or less.
- C. Subject to compliance with requirements, provide products from 1 of the specified manufacturers:
 - 1. Owens Corning; Trumbull Division.
 - 2. Approved Substitution.

2.2 COLD-APPLIED, CUT-BACK ASPHALT DAMPPROOFING

- A. Trowel Coats: ASTM D4586, Type I, Class 1, fibered.
- B. Brush and Spray Coats: ASTM D4479, Type I, fibered [**or nonfibered**].

- C. VOC Content: **[2.5 pounds per gallon] [4.2 pounds per gallon]** or less.
- D. Subject to compliance with requirements, provide products from 1 of the specified manufacturers:
 - 1. BASF Building Products: Hydrocide Mastics.
 - 2. ChemMasters Corp.: Mastergard 700.
 - 3. Euclid Chemical Company, The: Dehydratine.
 - 4. Henry Company: Premium Foundation Coating.
 - 5. Karnak Corporation: 86AF Fibered Trowel Mastic.
 - 6. W. R. Meadows, Inc.: Sealmastic Trowel-Mastic.

2.3 COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

- A. Trowel Coats: ASTM D1227, Type II, Class 1.
- B. Fibered Brush and Spray Coats: ASTM D1227, Type II, Class 1.
- C. Brush and Spray Coats: ASTM D1227, Type III, Class 1.
- D. VOC Content: **[Zero] [0.25 pounds per gallon]** or less].
- E. Subject to compliance with requirements, provide products from 1 of the specified manufacturers:
 - 1. BASF Building Products: Hydrocide 600.
 - 2. ChemMasters Corp.: Mastergard 400.
 - 3. Henry Company: Asphalt Emulsion.
 - 4. Karnak Corporation: Emulsion Dampproofing.
 - 5. Tamms Industries: Dehydratine.
 - 6. W. R. Meadows, Inc.: Sealmastic Emulsion.

2.4 PROTECTION COURSE

- A. Protection Course, Asphalt-Board Type: ASTM D6506, premolded, 1/8 inch thick, multi-ply, semirigid board consisting of a mineral-stabilized asphalt core sandwiched between layers of asphalt-saturated felt, and faced on 1 side with polyethylene film.
 - 1. Acceptable Products:
 - a. Henry Company: Asphalt Protection Board.
 - b. W. R. Meadows, Inc.: Vibraflex Waterproofing Protection Board.
 - c. Approved Substitutions.
- B. Protection Course: Fan folded, with a core of extruded-polystyrene board insulation faced on **[one] [or] [both]** side(s) with plastic film, nominal thickness 1/4 inch, with compressive strength of not less than 8 psi per ASTM D1621, and maximum water absorption by volume of 0.6 percent per ASTM C272.
- C. Protection Course: Unfaced, fan-folded, extruded-polystyrene board insulation, nominal thickness 1/4 inch with compressive strength of not less than 8 psi per ASTM D1621.
- D. Protection Course, Roll-Roofing Type: Smooth-surfaced roll roofing complying with ASTM D6380, Class S, Type III.
- E. Pink, unfaced rigid fiber glass protection board:
 - 1. Board Size: 4 foot by 8 foot .
 - 2. Board Thickness: **[3/4 inch] [1-3/16 inch] [2-3/8 inch]** thick unless otherwise indicated.
 - 3. Compression Pressure: **[200 psf] [400 psf] [600 psf]**
 - 4. Acceptable Product:
 - a. Tremco Barrier Solutions, Inc.: WARM-N-DRI.
 - b. Approved Substitutions.

2.5 MISCELLANEOUS MATERIALS

- A. Cut-Back Asphalt Primer: ASTM D41.
- B. Emulsified-Asphalt Primer: ASTM D1227, Type III, Class 1, except diluted with water as recommended by manufacturer.
- C. Asphalt-Coated Glass Fabric: ASTM D1668, Type I.
- D. Patching Compound: [**Epoxy or latex-modified repair mortar**] [**Manufacturer's fibered mastic**] of type recommended by dampproofing manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for surface smoothness and other conditions affecting performance of Work.
 - 1. Proceed with dampproofing application only after substrate construction and penetrating Work have been completed and unsatisfactory conditions have been corrected.
 - 2. Test for surface moisture per ASTM D4263.

3.2 PREPARATION

- A. Protection of Other Work: Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with dampproofing. Prevent dampproofing materials from entering and clogging weep holes and drains.
- B. Clean substrates of projections and substances detrimental to Work; fill voids, seal joints, and apply bond breakers if any, as recommended by prime material manufacturer.
- C. Apply patching compound for filling and patching tie holes, honeycombs, reveals, and other imperfections[; **cover with asphalt-coated glass fabric**].

3.3 APPLICATION, GENERAL

- A. Comply with manufacturer's written recommendations unless more stringent requirements are indicated or required by Project conditions to ensure satisfactory performance of dampproofing.
- B. Apply dampproofing to footings and foundation walls where opposite side of wall faces [**building interior**] [**occupied space**].
 - 1. Apply from finished-grade line to top of footing, extend over top of footing, and down a minimum of 6 inches over outside face of footing.
 - 2. Extend 12 inches onto intersecting walls and footings, but do not extend onto surfaces exposed to view when Project is completed.
 - 3. Install flashings and corner protection stripping at internal and external corners, changes in plane, construction joints, cracks, and where shown as "reinforced," by embedding an 8-inch-wide strip of asphalt-coated glass fabric in a heavy coat of dampproofing. Dampproofing coat for embedding fabric is in addition to other coats required.
- C. Apply dampproofing to provide continuous plane of protection on exterior face of inner wythe of exterior masonry cavity walls.
- D. Apply dampproofing to provide continuous plane of protection on interior face of above-grade, exterior [**concrete**] [**and**] [**masonry**] [**single-wythe masonry**] walls unless walls are indicated to receive direct application of paint.

3.4 HOT-APPLIED ASPHALT DAMPPROOFING

- A. Do not apply hot asphalt when substrate condition causes foaming.

- B. Kettle Temperature: Comply with dampproofing material manufacturer's written recommendations, and keep at least 25 degrees F below the flash point.
- C. Prime masonry and other porous substrates.
- D. Apply a uniform coat of hot asphalt by mopping or spraying at not less than 20 pounds or 2.5 gallons per 100 square feet.
- E. Apply a second coat [**to below-grade foundation walls**] as specified above. Apply double thickness of second coat where first application has failed to produce a smooth, shiny, impervious coat.

3.5 COLD-APPLIED, CUT-BACK ASPHALT DAMPPROOFING

- A. On Concrete Foundations[**and Parged Masonry Foundation Walls**]: Apply 2 brush or spray coats at not less than 1.25 gallons per 100 square feet for first coat and 1 gallon per 100 square feet for second coat, or 1 trowel coat at not less than 4 gallons per 100 square feet.
- B. On Unparged Masonry Foundation Walls: Apply primer and 1 trowel coat at not less than 4 gallons per 100 square feet.
- C. On Unexposed Face of Concrete Retaining Walls: Apply 1 brush or spray coat at not less than 1.25 gallons per 100 square feet.
- D. On Unexposed Face of Masonry Retaining Walls: Apply primer and 1 brush or spray coat at not less than 1.25 gallons per 100 square feet.
- E. On Concrete Backup for [**Stone Assemblies**] [**and**] [**Dimension Stone Cladding**]: Apply 1 brush or spray coat at not less than 1 gallon per 100 square feet.
- F. On Masonry Backup for [**Stone Assemblies**] [**and**] [**Dimension Stone Cladding**]: Apply primer and 1 brush or spray coat at not less than 1 gallon per 100 square feet.
- G. On Exterior Face of Inner Wythe of Cavity Walls: Apply primer and 1 brush or spray coat at not less than 1 gallon per 100 square feet.

3.6 COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

- A. On Concrete Foundations[**and Parged Masonry Foundation Walls**]: Apply 2 brush or spray coats at not less than 1.5 gallons per 100 square feet for first coat and 1 gallon per 100 square feet for second coat, 1 fibered brush or spray coat at not less than 3 gallons per 100 square feet, or 1 trowel coat at not less than 4 gallons per 100 square feet.
- B. On Unparged Masonry Foundation Walls: Apply primer and 1 trowel coat at not less than 5 gallons per 100 square feet.
- C. On Unexposed Face of Concrete Retaining Walls: Apply 1 brush or spray coat at not less than 1.25 gallons per 100 square feet.
- D. On Unexposed Face of Masonry Retaining Walls: Apply primer and 1 brush or spray coat at not less than 1.25 gallons per 100 square feet.
- E. On Concrete Backup for [**Stone Veneer Assemblies**] [**and**] [**Dimension Stone Cladding**]: Apply 1 brush or spray coat at not less than 1 gallon per 100 square feet.
- F. On Masonry Backup for [**Stone Veneer Assemblies**] [**and**] [**Dimension Stone Cladding**]: Apply primer and 1 brush or spray coat at not less than 1 gallon per 100 square feet.
- G. On Exterior Face of Inner Wythe of Cavity Walls: Apply primer and 1 brush or spray coat at not less than 1 gallon per 100 square feet.

- H. On Interior Face of Exterior Concrete Walls: Where above grade and indicated to be furred and finished, apply 1 brush or spray coat at not less than 1 gallon per 100 square feet.
- I. On Interior Face of [**Single-Wythe**] Exterior Masonry Walls: Where above grade and indicated to be furred and finished, apply primer and 1 brush or spray coat at not less than 1 gallon per 100 square feet.

3.7 INSTALLATION OF PROTECTION COURSE

- A. Where indicated, install protection course over completed-and-cured dampproofing. Comply with dampproofing material manufacturer's written recommendations for attaching protection course.
 - 1. Support protection course with spot application of adhesive of type recommended by protection board manufacturer over cured coating.
 - 2. Install protection course [**on same day**] [**within 24 hours**] of installation of dampproofing (while coating is tacky) to ensure adhesion.

3.8 CLEANING

- A. Remove dampproofing materials from surfaces not intended to receive dampproofing.

END OF SECTION