

SECTION 07 14 13
HOT FLUID-APPLIED RUBBERIZED ASPHALT WATERPROOFING

PART 1 - GENERAL

1.1 DESCRIPTION:

This section specifies hot fluid-applied rubberized asphalt material used for exterior below grade waterproofing and split slab waterproofing.

1.2 MANUFACTURER'S QUALIFICATIONS:

- A. Approval by Contracting Officer is required of products and services of proposed manufacturers, and installers, and will be based upon submission by Contractor that:
1. Manufacturer regularly and presently manufactures hot fluid asphalt waterproofing as one of its principal products.
 2. Installer has technical qualifications, experience, trained personnel and facilities to install specified items.
 3. Manufacturer's product submitted has been in satisfactory and efficient operation on three similar installations for at least three years.
 4. Submit list of installations, include name and location of project and name of owner.

1.3 SUBMITTALS:

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
1. Hot fluid-applied rubberized asphalt.
 2. Primer.
 3. Protection material, temporary and permanent.
 4. Printed installation instructions for conditions specified.
- C. Certificates:
1. Indicating hot fluid-applied rubberized asphalt waterproofing manufacturer's approval of primer.
 2. Indicating waterproofing manufacturer's qualifications as specified.
 3. Approval of installer by waterproofing manufacturers.
 4. Water test report.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver materials to job in manufacturer's original unopened container.

- B. Do not store material in areas where temperature is lower than 10 degrees C (50 degrees F,) or where prolonged temperature is above 32 degrees C (90 degrees F).

1.5 ENVIRONMENTAL REQUIREMENTS:

Ambient Surface and Material Temperature: Not less than 4 degrees C (40 degrees F), during application of waterproofing.

1.6 WARRANTY:

Warrant hot fluid-applied rubberized asphalt waterproofing installation against moisture leaks and subject to terms of "Warranty of Construction", FAR clause 52.246-21, except that warranty period is two years.

1.7 APPLICABLE PUBLICATIONS:

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced by basic designation only.
- B. American Society for Testing and Materials (ASTM):
- C578-10.....Rigid Cellular Polystyrene Thermal Insulation
- D41-11.....Asphalt Primer Used in Roofing, Dampproofing
and Waterproofing
- D412-06.....Vulcanized Rubber and Thermoplastic Elastomers-
Tension.
- D570-98(R2010).....Water Absorption of Plastics.
- D903-98 (R2010)Peel or Stripping Strength of Adhesive Bonds.
- D2240-05 (R2010)Rubber Property-Durometer Hardness.
- C. American Hardboard Association (AHA):
- A135.4-1995.....Basic Hardboard

PART 2 - PRODUCTS

2.1 FLUID-APPLIED RUBBERIZED ASPHALT:

- A. Hot applied waterproofing membrane composed primarily of rubberized asphalt material designed for below grade exterior and split slab waterproofing.
- B. TREMproof 6100 (Hot Rubberized Asphalt) used as basis of design.

2.2 PRIMER, ELASTOMETRIC SHEETING, AND REINFORCING FABRIC:

- A. Furnished by manufacturer of hot rubberized asphalt as required for particular application in accordance with sheet manufacturer's instructions.
- B. TREMprime QD Low Odor Primer used as basis of design.

2.3 PROTECTION MATERIAL:

- A. Polystyrene: ASTM C578, Type I or VIII, 13 mm (1/2-inch) minimum thickness.
- B. Hardboard: PS-58, Service Type, 6 mm (1/4-inch) thick.
- C. Waterproofed Building Paper: Fed. Spec. UU-B-790.
- D. Roll Roofing: ASTM D6380, Class S (smooth), Type III with minimum net mass per unit area of roofing, 2495 g/m² (51 lb/100 ft²).

2.4 PATCHING COMPOUND:

A factory prepared, non-shrinking, fast setting, cementitious adhesive compound containing no ferrous metal or oxide.

PART 3 - EXECUTION

3.1 PREPARATION:

- A. Surface Condition:
 - 1. Before applying waterproofing materials, ensure concrete and masonry surfaces are fully cured, smooth, clean, dry, and free from high spots, depressions, loose and foreign particles and other deterrents to adhesion.
 - 2. Fill voids, joints, and cracks with patching compound.
- B. Concrete surfaces cured a minimum of seven days, free from release agents, concrete curing agents, and other contaminants.

3.2 APPLICATION:

- A. Priming:
 - 1. Prime concrete and masonry surfaces.
 - 2. Application method, amount of primer and condition of primer before installation of hot fluid-applied rubberized asphalt waterproofing as recommended by primer manufacturer.
 - 3. Apply primer evenly without puddling. Primer shall be dry and tack free prior to full membrane installation.
 - 4. Reprime when required in accordance with manufacturer's instructions.
- B. Hot Fluid-Applied Rubberized Asphalt Installation:
 - 1. Apply waterproofing to the surface at a uniform rate sufficient to fully adhere reinforcing fabric. The rate will vary with surface conditions; however, a minimum application of 90 mils (.59 lbs per square foot (2.9 Kg/m²)) is required.
 - 2. Install reinforcing fabric immediately.
 - 3. Trim fabric such that there exists 3" nominal lap joints.

4. Apply waterproofing at the uniform rate of a 125 mils (.83 lbs per square foot (4.05 Kg/m²)) for a total film thickness of 215 mils. Allow system to cure for a minimum of 4 hours.
5. Flood test horizontal area with a minimum 1 inch of water for 24 hours.
6. Repair damage, as required, with an application of waterproofing and reinforcing fabric.
7. Install approved protection course, products upon successful completion of water test.

3.3 PROTECTION:

- A. Protect waterproofing before backfill or wearing courses are placed.
- B. Install protection material and hold in place in accordance with instructions of manufacturer of waterproofing materials.
- C. Permanent Protection:
 1. Vertical Surfaces:
 - a. Install hardboard, polystyrene, or roll roofing protection material.
 - b. Extend protection full height from footing to top of backfill.
 - c. If graded backfill is used, use roll roofing or hardboard.
 - D. Horizontal Surfaces:
 1. Install roll roofing protection under concrete wearing courses.
 2. Install roll roofing, hardboard, or polystyrene under earth backfill.
 3. Where no concrete wearing course occurs or when surfaces will bear heavy traffic and will not immediately be covered with a wearing course, use protection specified for vertical surfaces.
- E. Temporary Protection:

When waterproofing materials are subjected to damage by sunlight and can not be immediately protected as specified, protect waterproofing materials by waterproof building paper or suitable coating approved by manufacturer of waterproofing system used.

3.4 PATCHING:

Repair tears, punctures, air blisters, and inadequately lapped seams, in accordance with manufacturer's instructions before protection course is applied.

3.5 TESTING:

- A. Before any protection or wearing course is applied, test all horizontal applications of waterproofing with a minimum of 25 mm (1-inch) head of water above highest point and leave for 24 hours.
- B. Mark leaks and repair when waterproofing is dry.
- C. Certify, to Resident Engineer, that water tests have been made and that areas tested were found watertight.

3.6 INSPECTION:

Do not cover waterproofed surfaces by other materials or backfill until work is approved by Resident Engineer.

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