

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 17 00 BENTONITE WATERPROOFING

PART 1 - GENERAL

1.01 WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

1. Design to provide a complete composite sheet resealable membrane waterproofing system at inaccessible foundation walls as indicated, including locations where shoring (steel piles with wood lagging) is left in place.
2. Work includes design and installation of all applicable sealants, waterstops, and waterproofing flashings needed to ensure a complete waterproof system for buried concrete and masonry components at locations indicated.

1.02 WARRANTY

- A. Provide written warranties against defective materials and workmanship for a period of at least five years following date of substantial completion.

PART 2 - PRODUCTS

2.01 PRE-APPROVED MANUFACTURER

- A. Paramount System products by Tremco, Inc.

2.02 MATERIALS

- A. Membrane properties: Equal to "Paramount Paraseal Membrane," for use on buried vertical and horizontal conditions such as backfilled foundation walls and retaining walls:

1. Puncture resistance 95 psi
2. Tensile strength 4,000 psi
3. Water permeability through membrane $2.7 \times 10^{13} \text{ cm}^3/\text{cm}^2/\text{sec.}$
4. Water permeability through seam $4.6 \times 10^{10} \text{ cm}^3/\text{cm}^2/\text{sec.}$
5. Resistance to hydrostatic head 150 feet - zero leakage
6. Percent elongation 700%
7. Water migration under membrane 0 at 150 feet water head
8. Warranted crack bridging capability developing cracks to 1/8"
9. Sheet size 24' - 0" x 4' 0"

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- B. For use in blindside conditions on retained earth or where shotcrete/gunite is scheduled to be blown directly onto the membrane face, provide “Paramount Paraseal LG Membrane,” which is the Paraseal Membrane with additional protective laminate layer of spun polypropylene.

2.03 ACCESSORIES

- A. For installation at horizontal to vertical junctures, provide “Paramount Paragranular” loose bentonite granules in weatherproof 50 lb. bags and capable of swelling to occupy a minimum volume of 17 ml when 2 grams are dispersed into deionized water.
- B. For detailing vertical junctures and penetrations, provide “Paramount Paramastic” non hydrated expandable mastic of trowelable consistency containing not less than 55% high swelling Wyoming sodium-bentonite.
- C. Provide the Following Seam Tapes as Needed:
 - 1. “Temporary Tape” reinforced temporary joint closure tape 3 inches wide composed of acrylic adhesive bonded to polyvinyl chloride coated fabric used to protect seams against debris intrusion during backfill and for temporary terminations during periods of exposure to rain.
 - 2. “Permanent Seam Tape” reinforced, rubberized asphaltic waterproofing seam tape 4 inches wide by 60 mils thick for sealing membrane overlaps wherever flood testing is required and elsewhere as required by Project conditions or designs.
 - 3. “Para JT Tape” non reinforced, adhesive tape of partially cross linked polymeric elastomers 2 inches wide by 1/8 inch thick for molding form fit seals around difficult contours and for taping seams within overlaps.
- D. Provide “Paramount Paraterm Bar” extruded aluminum bar with upper flange to receive sealant for terminations at grade line and on parapet walls.
- E. Provide “Vulkem 116/227 Sealant” one or two part, gun grade polyurethane sealant for completing termination seals and other sealing recommended by manufacturer.
- F. Provide “Vulkem 201/222T Elastomeric Flashing” one or two part, trowel grade, polyurethane, liquid applied, elastomeric waterproofing flashing.
- G. Provide “Paramount Parastick’N’Dry Bentonite Tape” pressure sensitive, double sided laminate of bentonite sandwiched between a netting and non woven fabric for wrapping through concrete imbeds and other detailing.

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- H. Provide “Paramount Superstop: flexible reinforced, bentonite laminate waterstop strips 1/2 inch by 1 inch by 20 feet” with pressure sensitive adhesive backing for sealing static cold joints in concrete.
- I. Provide “Paramount Paraprimer” versatile adhesive bonding agent primer formulated for use with tapes and pressure sensitive waterproofing accessories.
- J. Provide “Paramount Paradrain” composite drainage mats composed of rot resistant non woven filter fabric on high density polyethylene drainage core.
- K. Provide base sheet of minimum 6 mil polyethylene sheet for use as hydration barrier below slabs.

PART 3 - EXECUTION (NOT USED)

END OF SECTION