

PART 1 - GENERAL

- 1.1 RELATED SECTIONS .1 Section 07 20 00 - Insulation.
- 1.2 PRODUCT DATA SHEETS .1 Submit product data sheets in accordance with Sections 01 33 00 and 01 78 00.
.2 For waterproofing membrane indicate VOC in g/L during application and curing.
- 1.3 QUALIFICATIONS .1 Applicator: company specializing in performing work of this section approved by membrane material manufacturer.
.2 Submit manufacturer's qualification letter to Departmental Representative in accordance with Sections 01 33 00 and 01 78 00.
- 1.4 DELIVERY, STORAGE AND HANDLING .1 Deliver materials to job site in undamaged and original packaging indicating name of manufacturer and product.
.2 Store pails (drums) in a dry, properly ventilated place and protect from the elements.
- 1.5 INSPECTION .1 Waterproofing installation shall be inspected by Departmental Representative before work is covered. Notify Departmental Representative when complete installation is ready for inspection.
- 1.6 ENVIRONMENTAL CONDITIONS .1 Weather and surfaces dry.
.2 Imminent weather forecast, dry.
.3 Temperatures above 10 C for waterproofing membrane.
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PART 2 - PRODUCTS

2.1 MATERIAL

- .1 Waterproofing membrane (spray or trowel applied): single component, liquid applied, elastomeric, water-based copolymer rubber, 52% solids, as follows:
 - .1 Water vapour permeance: maximum 34.2 ng/Pa.s.m² (0.6 perms) to ASTM E96/E96M-10, procedure B.
 - .2 Thickness: 1.5 mm (60 mil) wet film, 0.8 mm (30 mil) dry film.
 - .3 Tensile strength: 2.73 MPa (390 psi) to ASTM D412-06ae2.
 - .4 Elongation: 340% to ASTM D412-06ae2.
 - .5 Reinforcing: manufacturer's standard.
- .2 Protection board: semi-flexible core board in
 - .1 Fan folded extruded polystyrene.
- .3 Backfill material: excavated material free of rocks, concrete blocks, organic material, debris or other deleterious material that can damage the membrane.
- .4 Elastomeric coating:
 - .1 % solids by weight: 65%
 - .2 Elongation: 262% at 25 C, 116% at -18 C.
 - .3 Flexibility: Pass 3.175 mm (1/8") mandrel.
 - .4 Water Vapour Transmission: 12 Perms.
 - .5 Impact Resistance: 9.07 kg (20 lbs)
 - .6 Freeze Thaw Resistance: >50 Cycles; Pass.
- .5 Hydraulic cement: as recommended by manufacturer.

2.2 EQUIPMENT

- .1 Airless spray equipment: minimum pressure of 11.72 MPa (1700 psi).

PART 3 - EXECUTION

3.1 PREPARATION

- .1 Remove snow, water and condensation from surfaces.
 - .2 Ensure surfaces are sound, clean, even and free of oil, grease, dirt, or other contaminants.
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3.1 PREPARATION
(Cont'd)

- .3 Ensure all penetrations, drains, sleeves, vents, pipes and other items passing through substrate are properly placed and secured.
- .4 Ensure concrete surfaces are dry.
- .5 Crack treatment for non-working cracks or joints, maximum 6 mm: fill crack with hydraulic cement in accordance with waterproofing manufacturer's written instructions.
- .6 Repair defects that will impair adhesion and performance of membrane.
- .7 Provide forced air circulation or natural ventilation during installation and curing for enclosed applications.
- .8 Protect adjacent work from splash, spray or spillage.

3.2 APPLICATION

- .1 Apply to horizontal and vertical surfaces in accordance with manufacturer's written instructions where indicated and as follows.
- .2 Apply waterproofing membrane and reinforcing in accordance with manufacturer's instructions and as follows:
 - .1 Ensure full bond of membrane to substrate.
 - .2 Apply with trowel or airless spray equipment in multiple, uniform passes to provide seamless 1.5 mm (60 mil) wet film thickness.
 - .3 For foundation walls, commence application at the top of the footing, keeping the spray orifice 600-900 mm (2'-3') away from the wall. Carry membrane up wall to a minimum height of 150 mm (6") above final grade line or previously determined height approved by Departmental Representative.
 - .4 Ensure water tight seal to items penetrating membrane.
 - .5 Ensure continuity of building envelope air barrier.
 - .6 Upon completion of application, allow film to air dry to a tack-free film, minimum 30 minutes depending on temperature and humidity.
 - .7 Apply protection board, and insulation to Section 07 20 00, while membrane is still tacky. Do not overlap protection board.
 - .9 Protect application and curing from direct exposure to moisture and temperatures below 0 C.

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- 3.2 APPLICATION (Cont'd) .2 (Cont'd)
.10 Apply additional material where required.
- 3.3 BACKFILLING .1 Backfill minimum 24 hours after membrane application, using care and caution to avoid damaging the waterproofing application.
- 3.4 PROTECTION .1 Apply elastomeric coating to exposed membrane above grade.
- 3.5 FIELD QUALITY CONTROL .1 Departmental Representative's independent inspection agency will inspect and test membrane in accordance with Section 01 29 83.
- .2 Shedule site visits with Departmental Representative to review work at the following stages:
.1 After delivery and storage of products, and preparatory work is complete, but before application begins.
.2 Twice during progress of work at 25% and 60% complete.
.3 On completion of work, after cleaning is carried out.
- .3 Submit site visit reports to Departmental Representative within three (3) days of each visit.
- 3.6 CLEANING .1 Remove temporary coverings and protection fo adjacent work areas. Repair or replace damaged installed products.
- .2 Clean installed product in accordance with manufacturer's written instructions.
- .3 Check drains to ensure cleanliness and proper function.
- .4 Remove debris, equipment and excess material from site.