

# GUIDE SPECIFICATION FOR MEL-ROL: ROLLED, SELF ADHERING WATERPROOFING MEMBRANE

SECTION 07 13 26

## SELF-ADHERING SHEET WATERPROOFING

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) MasterFormat 2010. The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: W.R. Meadows SEALTIGHT® MEL-ROL® waterproofing system is a flexible, versatile, dependable, roll-type waterproofing membrane. It is composed of a nominally 56 mil thick layer of polymeric waterproofing membrane on a heavy duty, 4 mil thick, cross-laminated polyethylene carrier film. The two components are laminated together under strict quality-controlled production procedures. A handy overlap guideline is printed 2 ½" (63.5 mm) in from the material edge on each side to assure proper overlap coverage and to assist in maintaining a straight application. Special exposed polymeric membrane strips are provided on both sides for positive membrane-to-membrane adhesion in the overlap area. The membrane strips are protected by a pull-off release strip.

MEL-ROL waterproofing system provides a cost-effective answer to properly waterproof foundations, vertical walls and below-grade floors in residential and commercial construction. It is equally effective for use as between-the-slab waterproofing on plaza decks, parking decks and structural slabs. Use it as a waterproofing membrane to isolate mechanical and electronic rooms, laboratories, kitchens and bathrooms. MEL-ROL offers positive protection when "wrapped around" major rapid transit, vehicular, utility and pedestrian tunnel projects. MEL-ROL can also be used on insulated concrete forms (ICF).

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Application of rolled, self-adhering waterproofing membrane system.

#### 1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 07 21 00 – Thermal Insulation.
- C. Section 07 60 00 – Flashing and Sheet Metal.
- D. Section 07 92 00 – Joint Sealants.
- E. Section 33 46 00 - Subdrainage.

#### 1.03 REFERENCES

- A. American Railway Engineering & Maintenance of Way Association (AREMA) Specification Chapter 29 - Waterproofing.

- B. ASTM D146 - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Fabrics Used in Roofing and Waterproofing.
- C. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
- D. ASTM D570 - Standard Test Method for Water Absorption of Plastics.
- E. ASTM D903 - Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
- F. ASTM D1876 – Standard Test Method for Peel Resistance of Adhesives. (T-Peel Test).
- G. ASTM D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- H. ASTM E96 (Method B) - Standard Test Methods for Water Vapor Transmission of Materials.
- I. ASTM E154 - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.

#### 1.04 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Submit manufacturer's product data and application instructions.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean dry area in accordance with manufacturer's instructions.
- C. Store adhesives and primers at temperatures of 40°F (5°C) and above to facilitate handling.
- D. Store membrane cartons on pallets.
- E. Do not store at temperatures above 90°F (32°C) for extended periods.
- F. Keep away from sparks and flames.
- G. Completely cover when stored outside. Protect from rain.
- H. Protect materials during handling and application to prevent damage or contamination.
- I. Avoid use of products which contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with waterproofing membrane system.

#### 1.06 ENVIRONMENTAL REQUIREMENTS

- A. Product not intended for uses subject to abuse or permanent exposure to the elements.
- B. Protect rolls from direct sunlight until ready for use
- C. Do not apply membrane when air or surface temperatures are below 40°F (4°C).
- D. Do not apply to frozen concrete.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. W.R. MEADOWS, Inc., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

### 2.02 MATERIALS

- A. Rolled, Self-Adhering Waterproofing Membrane: Polymeric waterproofing membrane protected by release paper on cross-laminated polyethylene carrier film with exposed polymeric membrane strips on both sides protected by pull-off release strips.
1. Performance Based Specification: Waterproofing membrane shall have the following characteristics:
    - a. Compliance: AREMA Specification Chapter 29 - Waterproofing.
    - b. Thickness:
      - 1) Carrier Film: 4 mils.
      - 2) Polymeric Membrane: 56 mils.
    - c. Tensile Strength, ASTM D412, Die C:
      - 1) Carrier Film: 5,900 psi (40.71 MPa) minimum.
      - 2) Polymeric Membrane: 460 psi (3.23 MPa) minimum.
    - d. Elongation, ASTM D412, Die C: Polymeric Membrane: 971 % minimum.
    - e. Peel Adhesion, ASTM D903: 11.8 lbf/in. (2068 N/m).
    - f. Lap Adhesion, ASTM D1876: 8.62 lbf/in. (1508 N/m)
    - g. Water Vapor Permeability, ASTM E96, Method B: 0.036 perms.
    - h. Water Absorption, ASTM D570: 0.1 percent, 72 hours maximum.
    - i. Resistance to Hydrostatic Head: Equivalent to 230.9 feet (70.3 m) of water.
    - j. Puncture Resistance, ASTM E154: 48.2 lbf (214.6 N).
    - k. Exposure to Fungi, Soil Test: Pass, 16 weeks.
    - l. Color:
      - 1) Carrier Film: White.
      - 2) Polymeric Membrane: Black.
  2. Proprietary Based Specification: MEL-ROL Waterproofing System by W.R. MEADOWS.

Specifier Notes: Select one of the following MEL-ROL products based on air and surface temperatures during time of application.

- a. MEL-ROL: For use at temperatures of 40°F (4°C) and above.
- b. MEL-ROL LT (Low Temperature): For use at temperatures of 20°F (-7°C) to 60°F (16°C).
- c. MEL-ROL XLT (Extra Low Temperature): For use at temperatures of 0°F (-18°C) to 60°F (16°C).

### 2.03 ACCESSORIES

- A. Surface Conditioner:
1. Temperatures Above 40°F (4°C): Mel-Prime Water Base Primer.
  2. Temperatures Above 0°F (-18°C): Mel-Prime VOC Compliant Solvent Base Primer or Standard Solvent Base Primer.
- B. Flashing and Fillets: MEL-ROL LIQUID MEMBRANE.
- C. Pointing Mastic: POINTING MASTIC.
- D. Termination Bar: TERMINATION BAR.
- E. Corner Tape: DETAIL STRIP.
- F. Waterproofing Protection Course: PROTECTION COURSE
- G. Rolled Matrix Drainage System: MEL-DRAIN Rolled Matrix Drainage System.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Examine surfaces to receive self-adhering membrane. Notify Architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

### 3.02 SURFACE PREPARATION

- A. Protect adjacent surfaces not designated to receive waterproofing.
- B. Clean and prepare surfaces to receive waterproofing in accordance with manufacturer's instructions.
- C. Do not apply waterproofing to surfaces unacceptable to manufacturer.
- D. Concrete surfaces must be clean, smooth and free of standing water.
- E. Patch all holes and voids and smooth out any surface misalignments.
- F. Apply surface conditioner to surfaces that will be covered within one working day according to manufacturer's recommended coverage rates.
- G. Install corner tape on all inside and outside corners, including the footing.
- H. Apply a 9" (229 mm) strip of self-adhering membrane over construction, control and expansion joints and over cracks greater than 1/16" (1.59 mm) wide.
- I. Seal all terminations with pointing mastic.

### 3.03 APPLICATION

Specifier Notes: Select A (Horizontal Application), or B (Vertical Application) based on project requirements
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- A. Horizontal Application
  1. Apply waterproofing membrane system in accordance with manufacturer's instructions.
  2. Ensure accessory materials are compatible with membrane and approved by membrane manufacturer.
  3. Remove release paper on edge, then position the membrane.
  4. Pull balance of release paper off, running the roll from low to high points, so all laps will shed water.
  5. Immediately hand-rub the membrane firmly to the surface, removing any bubbles or wrinkles, then pressure roll the complete surface to assure positive adhesion.
  6. Stagger end laps and overlap all seams at least 2 1/2" (63.5 mm).
  7. Seal all terminations with pointing mastic.
  8. Inspect membrane before covering and repair as necessary. Cover tears and inadequate overlaps with membrane. Seal edges of patches with pointing mastic.
  9. Perform flood testing of horizontal applications, as required. Mark leaks and repair when membrane dries.
- B. Vertical Application
  1. Apply waterproofing membrane system in accordance with manufacturer's instructions.

2. Ensure accessory materials are compatible with membrane and approved by membrane manufacturer.
3. Remove release paper on edge and position the membrane.
4. Pull balance of release paper off, running the roll vertically over the top of the corner tape at the footing.
5. Immediately hand-rub the membrane firmly to the surface, removing any bubbles or wrinkles, then pressure roll the complete surface to assure positive adhesion.
6. Overlap all seams and stagger end laps at least 2 1/2" (63.5 mm).
7. Seal all terminations with pointing mastic.
8. Inspect membrane before covering and repair as necessary. Cover tears and inadequate overlaps with membrane. Seal edges of patches with pointing mastic.

#### 3.04 PROTECTION

- A. Protect membrane on vertical and horizontal applications with immediate application of waterproofing protection course, rolled matrix drainage board.
- B. Backfill immediately using care to avoid damaging waterproofing membrane system.

END OF SECTION