



Janet T. Mills
GOVERNOR

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Bruce A. Van Note
COMMISSIONER

December 5, 2019
Subject: Pennamaquan Bridge Deck
Replacement
State WIN: 022346.00
Location: **Pembroke**
Amendment No. 1

Dear Sir/Ms.:

The following question has been received:

Question: Currently, below specification calls for Bituthene 3000.

508.02 Materials Sheet membrane shall include all materials, as recommended by the manufacturer, to produce a waterproof barrier on the specified concrete surface. In addition to the membrane, these materials may include primer, hot-applied rubberized asphalt sealer, mastic, flashing, aggregate sealer and tack coat. The sheet waterproofing membrane shall be GCP Applied Technologies Bituthene 3000 or approved equal.

508.04 Construction-General The Contractor shall store and install the membrane and all associated components in accordance with the manufacturer's published recommendations.

We would like to request that our **MEL-ROL** please be reviewed as a rolled, self-adhering waterproofing membrane material here. Please see the attached data sheets to assist with review, if you can please let me know if it's acceptable it would be greatly appreciated.

Response: This meets or exceeded the published data of the Bituthene 3000, therefore, it will be allowed as an equal.

Consider this change and information prior to submitting your bid on **December 11, 2019**.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer

PRODUCT DATA

MasterFormat: 07 13 26

W. R. MEADOWS®

SEALTIGHT®

NO. 714

OCTOBER 2013
(Supersedes July 2012)

MEL-ROL®

Rolled, Self-Adhering Waterproofing Membrane

DESCRIPTION

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, four-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. All components of the MEL-ROL waterproofing system work together to provide a cost-effective, positive waterproofing system that's quick and easy to apply.

W. R. MEADOWS accessory products included in the MEL-ROL waterproofing system are: BEM, MEL-ROL LIQUID MEMBRANE, MEL-PRIME™ adhesive (solvent-based and water-based), POINTING MASTIC, DETAIL STRIP, CATALYTIC BONDING ASPHALT, TERMINATION BAR, PROTECTION COURSE and MEL-DRAIN™ drainage board.

USES

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).

Installation of PROTECTION COURSE from W. R. MEADOWS is recommended before backfilling. MEL-ROL can also be used with drainage boards when specified.

FEATURES/BENEFITS

- Provides cost-effective, flexible, versatile, dependable, positive waterproofing protection against damaging moisture migration and the infiltration of free water.
- Offers a quick and easy-to-apply system for maximum productivity.
- Special membrane-to-membrane adhesion provides additional overlap security.
- Meets or exceeds the test requirements of all currently applicable specifications.
- Components work together for positive waterproofing protection.
- Handles with ease on the jobsite.
- Available in a low temperature version for use when air and surface temperatures are between 20° F (-7° C) and 60° F (16° C). An extra-low temp version is also available, ideal for application in extra-low temperatures down to 0° F (-18° C).

PACKAGING

38.5" (977.9 mm) wide x 62.5' (19.1 m) long, one roll per carton.

COVERAGE

Provides 200 ft.² (18.6 m²) per roll. Gross coverage is 200 ft.² (18.6 m²). [Net coverage is 187.5 ft.² (17.4 m²) with overlap of 2 ½" (63.5 mm).]

STORAGE AND HANDLING

Store membrane cartons on pallets and cover if left outside. Keep materials away from sparks and flames. Store where temperature will not exceed 90° F (32° C) for extended periods of time.

SPECIFICATIONS

- A.R.E.M.A.® Specifications Chapter 29, Waterproofing
- LARR Report 26022

APPLICATION

Surface Preparation ... Concrete should be cured at least 72 hours, be clean, dry, smooth, and free of voids. Repair spalled areas; fill all voids and remove all sharp protrusions.

CONTINUED ON REVERSE SIDE...

W. R. MEADOWS, INC.

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FORT WORTH, TX / BENICIA, CA / POMONA, CA
GOODYEAR, AZ / MILTON, ON / ST. ALBERT, AB

MEL-ROL COMBINES POSITIVE WATERPROOFING PROTECTION WITH EASE OF HANDLING

EXCLUSIVE FEATURES

A handy overlap guideline is printed 2 ½" (63.5 mm) in from the material edge on each side, assuring proper overlap coverage and assisting in maintaining a straight application. The polymeric waterproofing membrane is protected by a special, easy-to-remove release paper. The exposed membrane strips on the material edges are protected by a pull-off release strip. Exposed polymeric membrane strips are provided on both sides of MEL-ROL for positive membrane-to-membrane adhesion in the overlap area ... note the detail, as shown in inset photo.

TECHNICAL DATA		
PROPERTY	TYPICAL VALUE	TEST METHOD
COLOR ... Carrier Film	White	
Polymeric Membrane	Black	
THICKNESS ... Carrier Film	4 mils	
Polymeric Membrane	56 mils	
TENSILE STRENGTH ... Carrier Film	5900 psi min. (40.71 MPa)	ASTM D 412
Membrane	460 psi (3230 KPa)	(Die C)
ELONGATION	971.3%	ASTM D 412
LOW TEMP CRACK BRIDGING		
100 Cycle -25° F (-32° C)	Pass	ASTM C 836
PEEL ADHESION	11.8 lb./in. (2068 N/m)	ASTM D 903
LAP ADHESION	8.62 lbf/in. (1508.5 N/m)	ASTM D 1876
WATER VAPOR PERMEABILITY	0.036 Perms	ASTM E-96, B
WATER ABSORPTION	0.1%, 72 hrs. max.	ASTM D 1970
HYDROSTATIC RESISTANCE	Equiv. to 230.9' (70.38 m) of water	ASTM D 5385
PUNCTURE RESISTANCE	48.24 lbf (214.6 N)	ASTM E 154
EXPOSURE TO FUNGI	Pass, 16 weeks	Soil Test
FLEXIBILITY @ -20° F (-29° C)	Pass	ASTM D 1970

MEL-ROL IS QUICK AND EASY TO APPLY

Temperature ... Apply in dry, fair weather when the air and surface temperatures are above 40° F (4° C). Do not apply to frozen concrete.

MEL-ROL LOW TEMP can be used when air and surface temperatures are between 20° F (-7° C) and 60° F (16° C).

Surface Conditioning ... Apply MEL-PRIME adhesive to surfaces that will be covered within one working day. If left exposed overnight, additional adhesive must be applied. Follow all instructions and precautions on containers.

REMOVE release paper from MEL-ROL from the top edge of the roll and firmly press exposed area to the wall. Remove the release paper from the rolls in a downward direction, pressing MEL-ROL into place on the wall.

Footing Details ... Use DETAIL STRIP for impaction sheet coverage. First, fold strips lengthwise and then cut at the fold. Material is then ready to install as 4 ½" (114.3 mm) strips on either side of the rebar. Any excess can be turned down on the face of the footing. Next, fill the voids around rebars in the keyway with CATALYTIC BONDING ASPHALT. Pour the walls. Install DETAIL STRIP horizontally along the wall where it meets the footing, placing half the material up the wall and the other half onto the footing. Extend the material 4 ½" (114.3 mm) beyond outside corners. Slit extended portion of DETAIL STRIP lengthwise. Place the horizontal flap out onto the footing and bend the vertical flap around the wall. (See Diagram A.) Repeat this procedure in the opposite direction as shown in Diagram B.

MEL-ROL can be applied to concrete, masonry surfaces, wood, insulated wall systems, and metal. All substrates must be clean, dry, and free of all surface irregularities.

DIAGRAM A
Outside Corner

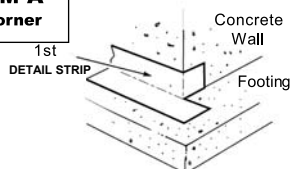
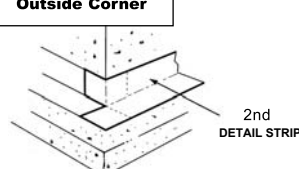
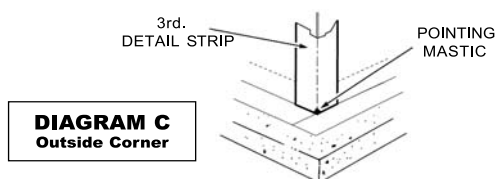


DIAGRAM B
Outside Corner



Horizontal Application ... Remove release paper on edge, then position the MEL-ROL membrane. Pull balance of release paper off, running the roll from low to high points, so all laps will shed water. Stagger end laps and overlap all seams at least 2 ½" (63.5 mm). Apply a double-thickness of the MEL-ROL membrane over construction, control, all expansion joints and over cracks greater than 1/16" (1.59 mm) wide.

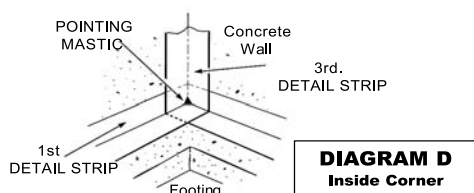
Vertical Wall Application ... Masonry walls may require the application of a cementitious parge-coat. Allow the parge-coat to dry before priming and applying MEL-ROL. When applied, the parge-coat will produce a smooth, uniform, and well-bonded surface. Remove release paper, then apply vertically in lengths approximately 8' (2.44 m) long over the top of the horizontal DETAIL STRIP at the footing. Overlap seams at least 2 1/2" (63.5 mm). Tightly butt edges of membrane and apply POINTING MASTIC in corner applications. (See Diagram C.)



To the top terminations, apply POINTING MASTIC at least 1/8" (3.18 mm) thick and 1" (25.4 mm) wide. As an option, TERMINATION BAR may be used to mechanically fasten the membrane.

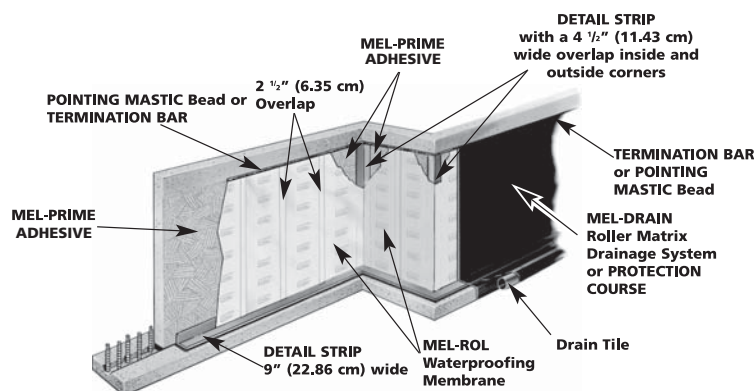
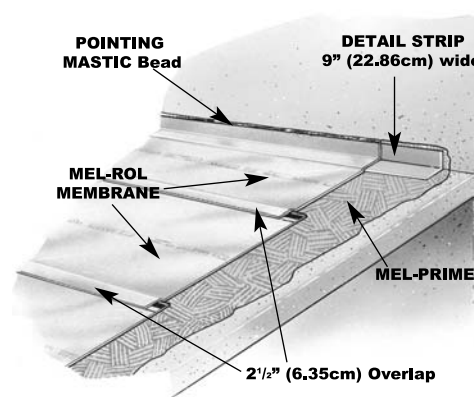
Hand-Rub and Roll Press ... Once positioned, immediately hand-rub the MEL-ROL membrane firmly to the surface, removing any bubbles or wrinkles, then pressure roll the complete surface to assure positive adhesion.

Inside Corners ... Before MEL-ROL is applied, place a vertical DETAIL STRIP on inside corners extending the material 4 1/2" (114.3 mm) beyond each side of the corner. (See Diagram D.) Terminate at the footing and finish the corner with POINTING MASTIC.



Outside Corners ... Bend DETAIL STRIP vertically over the outside corner and extend 4 1/2" (114.3 mm) beyond each side of the corner. Terminate the material at the footing. Finish the corner with POINTING MASTIC. (See Diagram C.)

Drains and Protrusions ... All protrusions should be sealed with two layers of membrane applied at least 6" (152.4 mm) in all directions. Seal all terminations with POINTING MASTIC. Around drains, apply two layers of MEL-ROL and put a bead of POINTING MASTIC between the membrane and clamping rings and at all terminations, drains, and protrusions. See ASTM D 5898.



Inspect and Repair ... A thorough inspection should be made before covering and all necessary repairs made immediately. Tears and inadequate overlaps should be covered with MEL-ROL ... slit fish mouths and patch. Seal edges of all patches with POINTING MASTIC. Where applicable, horizontal applications can be flood-tested for 24 hours. All leaks should be marked and repaired when membrane dries.

Protect the Membrane ... on all vertical and horizontal installations with the immediate application of PROTECTION COURSE if no drainage system is used, or MEL-DRAIN. To secure PROTECTION COURSE, use POINTING MASTIC as an adhesive, and/or physically attach at the top edge using TERMINATION BAR. Backfilling should be done immediately, using care and caution to avoid damaging the waterproofing application.

PRECAUTIONS

Avoid the use of products that contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with MEL-ROL. The use of MEL-ROL does not negate the need for relief of hydrostatic heads. A complete drain tile system should be placed around the exterior of footing and under slabs, as required.

ACCESSORIES

MEL-PRIME W/B ... This water-based adhesive prepares concrete surfaces for MEL-ROL application. Arrives ready to use. Requires no additional mixing. MEL-PRIME W/B emits no unpleasant odors and works with all W. R. MEADOWS waterproofing membranes. Applies easily with manual sprayer or roller; VOC-compliant. MEL-PRIME W/B is for use at temperatures of 40° F (4° C) and up.

COVERAGE: 150 - 200 ft.²/gal. (3.7 - 4.9 m²/L)

PACKAGING: 1 Gallon (3.79 Liter) Units (4 units per carton), 5 Gallon (18.93 Liter) Pails

MEL-PRIME ... This solvent-based adhesive is for use at temperatures of 25° F (-4° C) and above. Apply by roller.

COVERAGE: 250-350 ft.²/gal. (6.14 to 8.59 m²/L) PACKAGING: 5 Gallon (18.93 Liter) Pails

MEL-ROL LIQUID MEMBRANE ... A two-component material used as a flashing to form fillets at corners and at protrusions. May be used as a substitute for POINTING MASTIC. Product can also be used in between walls and footings in lieu of DETAIL STRIP.

COVERAGE: As a fillet, approximately 135 lineal feet per gallon (10.87 m per liter) PACKAGING: 1 Gallon (3.79 Liter) Units, 4 Units per carton.

BEM ... BEM can be used as a fillet to round out 90° angles, such as the wall-footing connection, and can be used as a substitute for MEL-ROL LIQUID MEMBRANE.

COVERAGE: As a fillet, approximately 135 lineal ft./gal. (10.9 m/L). PACKAGING: 28 Oz. (828 mL) Cartridges (12 per Carton)

POINTING MASTIC ... Used as an adhesive and for sealing top edge terminations on DETAIL STRIP and membrane, and to adhere PROTECTION COURSE.

COVERAGE: 1/8" x 1" x 200"/gal. (3.18 mm x 25.4 mm x 16.10 ml). PACKAGING: 5 Gallon (18.93 Liter) Pails, 29 Oz. (857.65 ml) Cartridges, 12/ctn.

CATALYTIC BONDING ASPHALT ... Easy-to-apply, one-component material for sealing around rebar.

COVERAGE: 5 gal./1000 ft.²/gal. (4.9 m²/L) PACKAGING: 5 Gallon (18.93 Liter) Pails.



LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. W. R. MEADOWS, INC. cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection

with the use of this information. As W. R. MEADOWS, INC. has no control over the use to which others may put its product, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.

DETAIL STRIP ... Convenient, easy-to-use DETAIL STRIP provides an economical and effective method for sealing vertical and horizontal butt joints, i.e. inside or outside corners and where walls and footings meet.

PACKAGING: 9" x 50' (.23 x 15.24 m) roll, 4 rolls per carton.

PROTECTION COURSE ... Use for vertical and horizontal applications. Adhere with POINTING MASTIC or use mechanical fasteners.

PACKAGING: 4' x 8' (1.22 x 2.44 m) panels.

MEL-DRAIN ... is a dimple-raised molded polystyrene fabric designed to provide high flow capacity to reduce hydrostatic pressure buildup around waterproofing and vaporproofing membranes. Choice of drain types are available for vertical, horizontal, and site applications. Use MEL-PRIME to condition surface prior to application of MEL-DRAIN.

TERMINATION BAR ... is a high strength, pre-formed, multi-purpose, plastic strip designed to support vertical membrane systems and PROTECTION COURSE at their termination point.

PACKAGING: 10' (Holes every 6" o/c, 2" from either end), 25 pieces per carton.

MAINTAIN ENERGY EFFICIENCY

Wet insulating materials lose much of their "R" factor performance characteristics, reducing the energy efficiency of the structure. W. R. MEADOWS thermal and moisture protection products play a key role in *maintaining* the structure's energy efficiency and aiding in the integrity of other structural systems, such as insulation.

LEED INFORMATION

May help contribute to LEED credits:

- EA Credit 1: Optimize Energy Performance
- IEQ Credit 3.1: Construction Indoor Air Quality Management Plan: During Construction
- IEQ Credit 7.1: Thermal Comfort - Design
- MR Credit 2: Construction Waste Management
- MR Credit 5: Regional Materials

For CAD details, most recent data sheet, further LEED information, and MSDS, visit www.wrmeadows.com.