

This document is a supplement to the HRM 714 guide specification and technical data sheet available at www.wrmeadows.com. HRM 714 is a robust 2-ply, 215-mil, seamless, polymer-modified hot-applied waterproofing system and is eligible for warranty coverage up to 20 years.

As the majority of applications for HRM 714 involve concrete decks, this document is prepared primarily around these substrates. HRM is also suitable for use on gypsum roof cover boards and plywood decking and is applied in the same general manner with several additional steps.

HRM 714 is appropriate for use in protected membrane roofing assemblies (PMRA). These include but are not limited to plaza and amenity decks and split-slab applications for parking garage decks. Contact W. R. MEADOWS Technical Product Support ((800) 342-5976) for assistance with applications and use not referenced in this document.

REQUIRED PRODUCTS

HRM 714: 100% solids hot-applied rubberized asphalt membrane intended for structural waterproofing, plaza decks, vegetated roofing and PMRA roofing applications.

MEL-PRIME: Solvent-based adhesive used for the preparation of substrates to receive HRM 714. Application methods and rates are found in the MEL-PRIME technical data sheet online (www.wrmeadows.com).

REINFORCING FABRIC HCR: Spun-bonded polyester fabric for use in 2-ply, reinforcement applications of HRM 714.

BEM: One-component, moisture-curing building envelope membrane intended for the repair of cracks and for HRM 714 applications.

NEOPRENE FLASHING MEMBRANE: 60-mil, uncured neoprene flashing for use as reinforcement of cracks, cold joints, expansion joints, dissimilar material transitions and connections, penetrations, exposed flashings and protection course in conjunction with installation of the HRM 714 System.

Preferred Method - PC-2 or PC-3 PROTECTION COURSE:

Optional 1/8" (3.18 mm) or 1/4" (6.35 mm) mineral-fortified asphaltic protection board as protection layer where substantial loading conditions require high compressive strength protection of HRM 714.

Optional MODIFIED PROTECTION COURSE (By Others)

80-90-mil, mineral-surfaced (both sides) modified asphalt rolled sheet for use as final protection layer.

TERMINATION BAR: Preformed and pre-drilled plastic termination bar for vertical termination of neoprene and modified asphalt flashing membranes used with HRM 714.

MEL-DRAIN: Rolled drainage matrix system for use with HRM 714 in plaza deck and vegetated roofing applications.

LIMITATIONS

- Applications of HRM 714 to metal pan composite concrete decks requires the pans to be of the venting type.
- Normal weight structural concrete requires a 28-day cure time; 14 days minimum.
- Lightweight, non-structural and insulating concrete types and OSB are not acceptable substrates.
- Steel-troweled concrete is not acceptable. Concrete surfaces must be wood-floated or broomed.
- HRM 714 must not be installed over or come into contact with coal tar pitch. Coal tar pitch waterproofing shall be removed down to the structural deck.
- HRM 714 and rolled mineral-surfaced protection course are not intended for permanent exposure. Mineral-surfaced protection course used over HRM 714 provides incidental, light foot traffic. Prolonged exposure and heavy traffic before installation of overburden and finish items requires additional protection measures.
- Do not heat membrane above 410° F (210° C).



INSTALLATION INSTRUCTIONS | HRM 714

STORAGE

- Store hot rubberized asphalt in closed containers.
- Store surface primer away from open flame and excessive heat. Keep primer above 40° F (4.4° C).

SUBSTRATE PREPARATION AND EXAMINATION

Ensure all surfaces are sound, clean, dry, without frost, oil-free and without any contaminants detrimental bonding of primary membrane system. All substrates must be smooth and void of mortar droppings. Fins and bug holes shall be ground smooth and filled with an appropriate patching mortar such as MEADOW-PATCH 20. Concrete shall be finished with a wood float or broom. Steel trowel finish is not acceptable.

The waterproofing contractor shall examine and deem acceptable all substrates and conditions to receive the hot-applied rubberized asphalt waterproofing system. Commencement of any and all portions of the HRM 714 System installation shall constitute contractor acceptance of substrate and ambient conditions.

MEMBRANE HEATING

Using either an air or oil-jacketed kettle, maintain a temperature between 360° F and 400° F (182-205° C). Direct-heated kettles for SEBS asphalt are not acceptable.

Once the kettle is up to temperature, introduce 25 lb. (11.4 kg). asphalt cakes, leaving the polyethylene wrapper intact. Keeping vigilance of the correct temperature range noted above is very important. Do not heat HRM 714 above 410° F (210° C) and avoid prolonged heating of asphalt for more than 5 hours.

DETAILING

TREATMENT OF CRACKS AND JOINTS

The following reinforcement of cracks and joints presumes they are non-moving (i.e. static). Where joints and cracks are anticipated to be moving (i.e. dynamic), refer to the recommendations at the conclusion of the EXPANSION JOINTS section.

Treatment of cracks between 1/16" (1.5 mm) and 1/8" (3 mm) are as follows:

1. Prime concrete decks a minimum 5" (127 mm) on both sides of crack with MEL-PRIME.
2. Apply a 125-mil coating of HRM 714 membrane a minimum of 6" (150 mm) wide, centered over cracks.

3. Immediately embed a 6" (150 mm) section of REINFORCING FABRIC HCR into membrane while hot, ensuring fabric is centered over the crack or joint. Overlap fabric 2" (51 mm) at end laps and ensure laps are engaged with hot-applied membrane.
4. Brush fabric into membrane to eliminate wrinkles.

Treatment of cracks or joints 1/8" to 1/2" (3 to 12 mm) in width on substrates are as follows:

1. Prime concrete decks a minimum of 5" on both sides of crack or joint with MEL-PRIME.
2. Apply a 125-mil coating of HRM 714 membrane a minimum of 6" (150 mm) wide centered over the crack or joint.
3. Immediately embed a 6" (150 mm) wide strip of NEO-PRENE FLASHING MEMBRANE or approved 80-90-mil modified asphalt flashing onto HRM 714 while hot.
4. Center flashing over the joint or crack and ensure neoprene or modified flashings overlap 6" (150 mm) at end laps with laps fully engaged with hot-applied membrane.

Treatment of v-grooves between hollow core concrete planks are as follows:

1. Prepare v-grooves along the long edges of hollow core concrete planks in accordance with ICRI Technical Guideline 310.2 along with the requirements of MEADOW-PATCH 20 Repair Mortar guide specification and technical data sheet.
2. V-notched areas receiving mortar patching are to be conditioned to a minimum concrete surface profile (CSP) of 4 through mechanical abrading or high-pressure water spraying. Sanding, cup grinding or wire abrading are not acceptable methods.
3. Mix and install MEADOW-PATCH 20 in accordance with its current technical data sheet and guide specifications.
4. Once mortar-patched areas are cured, prime patched areas and horizontal surfaces immediately adjacent to both sides of patch extending outward a minimum of 5" (127 mm) with MEL-PRIME.
5. Evenly apply a 125-mil coating of HRM 714 onto the patched v-grooves extending 3" (76 mm) beyond each edge of patched area.
6. Immediately embed REINFORCING FABRIC HCR into membrane while hot. Brush fabric into membrane to eliminate wrinkles. Ensure a minimum 2" (51 mm) overlap of successive applications of reinforcing fabric with laps fully engaged with HRM 714 membrane.

INSTALLATION INSTRUCTIONS | HRM 714

At the discretion of the designer of record or consultant, use of NEOPRENE FLASHING MEMBRANE or approved 80-90 modified asphalt flashing can be substituted for fabric reinforcement. These alternate reinforcement methods are considered where dynamic joint reinforcement conditions may exist.

EXPANSION JOINTS

Treatment of expansion joints up to 1/2" (13 mm):

1. Prime concrete decks with MEL-PRIME a minimum of 2" (51 mm) beyond areas to receive hot-applied membrane and expansion joint. Allow primer time to flash off and cure.
2. Friction-fit appropriately sized CERAMAR Flexible Foam Expansion Joint into gap opening.
3. Evenly apply a 125-mil coating of HRM 714 onto the deck a minimum of 8" (152 mm) beyond both sides of joint opening, completely covering Flexible Foam Expansion Joint.
4. Immediately embed a minimum 12" (305 mm) wide section of NEOPRENE FLASHING MEMBRANE into membrane and centered over the expansion joint while the membrane is hot. Brush flashing to ensure full contact with membrane. Overlap ends of successive sections of flashing 6" (152 mm) and ensure 125 mils of HRM 714 in between laps.
Note: Flashing does not require "slack" or "looping" into the expansion joint for widths up to 1/2" (13 mm). The flashing merely needs to lay flat across the joint.

Treatment of expansion joints 1/2" to 2" (13 to 51 mm):

1. Prime concrete decks with MEL-PRIME a minimum of 2" (51 mm) beyond areas to receive hot-applied membrane and expansion joint. Allow primer time to cure.
2. Evenly apply a 125-mil coating of HRM 714 onto the deck a minimum of 6" (152 mm) beyond both sides of joint opening.
3. Loop NEOPRENE FLASHING MEMBRANE into gap 1-1/2" (38 mm) and embed a minimum 6" (152 mm) wide section of flashing onto the deck on both sides of joint. Ensure membrane is hot during this procedure.
4. Brush flashing to ensure full contact with membrane. Overlap ends of successive sections of flashing 6" (152 mm) and ensure 125 mils of HRM 714 in between laps.

Note: Where excessive movement or vibration conditions exist, architect or engineer of record may consider securing flashing through the use of a termination bar affixed to the outer edges of flashing membrane. Where larger expansion joint systems are required beyond the scope outlined herein, contact W. R. MEADOWS for additional options.

PANELIZED DECKING

This section covers reinforcement of non-moving flat (horizontal) panel-to-panel joint connections. Acceptable panel substrates include gypsum roof cover boards and plywood. OSB substrates are not acceptable. Fastener types and schedules for the securement of panelized decking is the responsibility of the architect or engineer of record and therefore not included in this section.

1. Prime areas a minimum of 5" (127 mm) extending away from panel joints with MEL-PRIME and allow to cure.
2. Apply a 125-mil coating of HRM 714 a minimum of 3" (76 mm) on each side of the primed flat, panel-to-panel joint.
3. Immediately embed a 6" (152 mm) wide section of REINFORCEMENT FABRIC HCR, centered over the joint while membrane is hot.
4. Ensure a minimum 2" (51 mm) overlap at ends of successive sections of reinforcement fabric with full engagement of HRM 714 between overlaps.
5. Brush or broom to fully embed fabric reinforcement and eliminate wrinkles.

DRAINS

1. Prime exposed horizontal sections of installed drain flange and areas extending 8" (203 mm) outward of concrete deck MEL-PRIME and allow to cure.
2. Evenly apply a 125-mil coating of HRM 714 to primed drain flange and 6" (152 mm) of concrete deck immediately around the drain assembly.
3. Immediately embed NEOPRENE FLASHING MEMBRANE into HRM 714 while hot. Ensure a minimum 6" (152 mm) overlap of successive flashing courses with a full 125 mil engagement of hot membrane between laps.

VENT PIPE PENETRATIONS

1. Set NEOPRENE FLASHING MEMBRANE into a 125-mil coating of HRM 714 onto a minimum 8" (203 mm) vertical section of pipe penetration and extend a minimum 4" (102 mm) horizontally from pipe base onto prepared substrates. Ensure a minimum 6" (152 mm) overlap of subsequent flashing connections with a full 125-mil coating of hot-applied membrane between laps.
2. Apply a stainless-steel band clamp to the top leading terminating edge of NEOPRENE FLASHING MEMBRANE. Apply a bead of POINTING MASTIC to seal the top edge of flashing to the pipe immediately above the band clamp.
3. Apply the 215-mil, 2-ply reinforced HRM 714 System on the deck up to and terminate at pipe base. Apply a fillet bead of BEM to flashed pipe and HRM 714 interface around base of pipe.

INSTALLATION INSTRUCTIONS | HRM 714

Note: for mechanical fastener penetrations after HRM 714 System installation, such as those with flanged baseplates for securing railing systems, the following is recommended. Pre-fill anchor fastener holes drilled through HRM 714 with POINTING MASTIC. Generously apply POINTING MASTIC to the underside of flanged baseplates before anchoring fastener systems. Once securely in place, completely cover heads of fasteners with POINTING MASTIC. HRM 714 may be substituted for this step. Prior to coating the top of baseplates or any substantial steel surfaces, these surfaces shall be mechanically abraded, cleaned and primed – the latter in accordance with current HRM 714 technical data sheet and guide specifications.

CURBS, INSIDE AND OUTSIDE CORNERS

Note: Application methods in this section presume inside and outside corners are integral (cast) with surrounding horizontal areas. As such, these conditions are to be considered static (non-moving).

Inside corner conditions considered dynamic (moving) and requiring expansion joint detailing shall follow the outlines covered in the EXPANSION JOINTS section.

1. Using MEL-PRIME, prime areas a minimum of 5" (127 mm) onto each adjacent plane.
2. Apply a 125-mil coating of HRM 714 to minimum 5" (76 mm) wide section extending onto each adjacent plane.
3. Immediately embed a 6" (152 mm) wide section of REINFORCING FABRIC HCR, centered over the apex of inside or outside corner apex, into membrane while hot. Ensure a 2" (51 mm) overlap of successive course of reinforcement fabric with full engagement of membrane between laps.

Note: It is a common and acceptable practice to use a single continuous section of reinforcement fabric to completely 'wrap' a curb from the deck-up. An example of this condition is a site-cast concrete podium for mechanical equipment.

PARAPET AND EXTERIOR WALL VERTICAL TERMINATIONS

Following NRCA guidelines, the recommended minimum flashing height above the HRM 714 Membrane System is 8" (203 mm). In certain climatic conditions (e.g. snow), vertical flashing termination may need to exceed 4" above the finish overburden items such as concrete topping slabs, pavers, etc.

1. Apply MEL-PRIME a minimum of 6" (152 mm) to structural decks, extending outward from vertical conditions. Apply MEL-PRIME to vertical surfaces extending a minimum of 2" (51 mm) above the intended flashing termination.
2. Apply a 125-mil coating of HRM 714, 6" (152 mm) wide onto the horizontal structural deck and the same thickness vertically onto parapet extending 2" beyond intended flashing installation.
3. Immediately embed NEOPRENE FLASHING MEMBRANE into HRM 714 to both horizontal and vertical conditions

while hot. Flashing shall extend a minimum of 4" (102 mm) horizontally.

4. Apply flashing onto vertical sections a minimum of 8" (203 mm) or greater, or as finish overburden items dictate.
5. Ensure a minimum 6" (152 mm) overlap of successive applications of neoprene; long ends (side laps) shall have a minimum 2" (51 mm) overlap of successive rolls. All laps shall have a full 125-mil coating of HRM 714.

Note: Modified asphalt flashings are an acceptable alternate to NEOPRENE FLASHING MEMBRANE within this section. Granular-coated modified asphalt flashings can tolerate UV conditions and are an acceptable alternate to neoprene, whereas mineral-surfaced modified flashings are not intended for permanent UV conditions and must be covered with brake metal counterflashing. Modified flashings are to be installed in the same manner as neoprene flashings noted above.

Note: Where exterior vertical wall terminations of HRM 714 Membrane System are to connect with an air barrier system, contact W. R. MEADOWS technical product support or regional Architectural Specialist for connection detail recommendations.

PRIMARY 215-MIL HOT-APPLIED MEMBRANE INSTALLATION

1. Apply MEL-PRIME to all non-detailed conditions. Re-prime excess areas previously primed for the detail flashing noted throughout this document.
2. Once primer has flashed off and cured, apply a uniform 90-mil application of HRM 714 to all areas required to be waterproofed, including all previously detailed conditions outlined above.
3. Immediately embed REINFORCING FABRIC HCR into the membrane while hot. Ensure a uniform 2" (51 mm) overlap of fabric on all sides and ends with full engagement of membrane between laps.
4. Brush reinforcement fabric while membrane is warm and eliminate wrinkles.
5. Once membrane and fabric are set, apply a 125-mil coating of HRM 714 onto fabric reinforcement.
6. While membrane is still hot, embed rolled protection course. Ensure membrane is fully engaged at all side and end laps with evidence of membrane 'bleeding out' of these laps. Lap sides of protection course 2" (51 mm) and ends 6" (152 mm).

Note: Where high loading conditions exists, use of PC-2 or PC-3 PROTECTION COURSE shall be considered. Immediate application of PROTECTION COURSE into membrane while is hot is required with sides and ends firmly butted together. For standard protection course applications, 36" (900 mm) wide rolls of uncured neoprene are also acceptable; however, longer lead times are likely. Two-inch (50 mm) side laps and 6" (150 mm) end laps are required for neoprene, with full membrane engagement between laps.

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