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HRM 714

Hot-Applied Rubberized Waterproofing Membrane

DESCRIPTION

HRM 714 hot-applied rubberized asphalt waterproofing membrane is a 100% solids blend of asphalts, synthetic rubber polymers, and filler formulated to provide toughness with flexibility and low moisture vapor permeance.

USES

HRM 714 is hot-applied to form a continuous elastomeric membrane. It is ideal for waterproofing bridge, parking, plaza, or promenade decks; tunnels; pedestrian concourses; and similar types of construction where a monolithic waterproofing membrane is desirable.

FEATURES/BENEFITS

- Excellent combination of toughness and low temperature flexibility.
- Very low absorption and vapor permeance.
- Unique formulation effectively prevents degradation of the rubber content by overheating.
- 0 g/L VOC

PACKAGING

50 Lb. (22.7 kg) Cartons (two 25 lb. buns)

COVERAGE

Thickness (Mils)	Application Rate
125	0.72 lb./ft. ² (3.5 kg/m ²)
215	1.23 lb./ft. ² (6 kg/m ²)

Coverage is average depending on surface condition. Note: After first coat, REINFORCING FABRIC HCR from W. R. MEADOWS should be installed in the membrane.

SHELF LIFE

Five years in unopened container.

TECHNICAL DATA

		Test Method
Flash Point	>500° F (>260° C)	
Cone Penetration, dmm:		ASTM D5329
@ 32° F (0° C)	25	
@ 77° F (25° C)	55	
@ 120° F (48.9° C)	160	
Flow @ 140° F (60° C)	0.1	ASTM D3407
Resilience, %	60	ASTM D5329
Bond, Non-Immersed	Pass	ASTM D5329
Asphalt Compatibility	Pass	ASTM D5329
Water Vapor Permeability	0.01 Perms	ASTM E96, Procedure B
Low Temp Flexibility @ -15° F (-26.1° C)	No Cracking	
Softening Point	210° F (100° C)	
Heat Stability 5 hours @ 390° F (198.9° C)	No Change	
Wt./Gal., Lb./Gallon	10.0	

APPLICATION

Positive slab drainage is recommended by means of a minimum 1/8" (3 mm) in 12" (300 mm) slope and preferably 1/4" (6 mm) in 12" (300 mm) slope to adequate drainage.

Equipment ... Use an insulated, double-shell, oil-jacketed kettle. **Do not use a direct-fired roofer's kettle.** The melting kettle requires an engine-driven agitator and thermometers for both the oil and the compound.

CONTINUED ON REVERSE SIDE...

A positive high limit control which will shut down the heating system if the heat transfer oil or the compound reaches the safe heating limit is recommended. Preferable is a totally automatic temperature control system controlling both the heat transfer oil temperature and the compound temperature.

Highly advantageous is a pressure draw-off and application system including a pump, high pressure/high temperature insulated hose, and piping to provide constant recirculation of the compound. An air pressure means of purging the hose and pipe lines of the compound at shut-down should also be included.

Heating ... On start-up, raise the oil bath temperature to 450° F (230° C) maximum. Place HRM 714 into the kettle. Do not remove the polyethylene liner. Its incorporation into the material does not affect its performance. As the compound becomes fluid, add additional quantities up to the required amount, agitating continuously.

Recommended pouring temperature range is 360° - 400° F (182° - 205° C). Do not hold material at pouring temperature for longer than five hours. If pouring is to be delayed, reduce temperature to between 270° - 320° F (132° - 160° C) and hold until pouring is to be resumed. Do not heat the compound above 410° F (210° C).

Prolonged heating (longer than five hours) or heating above 410° F (210° C) may cause the compound to gel in the melter. A rapid increase in viscosity of the material accompanied by stringiness indicates that gelling has begun. The compound temperature must be reduced promptly or the material should be removed promptly from the kettle.

Surface Preparation ... Prior to commencement of the waterproofing application, the following preparation may be necessary:

Chip or grind off concrete spills from subsequent pours. Fill depressions in the concrete left by form boards, footprints, screed rail chairs, etc. with MEADOW-PATCH® 5 from W. R. MEADOWS. Remove areas of heavy laitance with a grinder, brush hammer, scabber, or similar device.

Grind off sharp projections, fishtails, and sharp corners. Patch honeycombed concrete with MEADOW-PATCH 5.

On existing structures, remove old waterproofing. Remove lightly scaled concrete down to sound concrete and restore to proper cross section and grade with a Portland cement mixture. Where scaled and spalled concrete exposes reinforcing steel, remove concrete to below exposed steel and replace with MEADOW-CRETE® GPS from W. R. MEADOWS.

Do not use hot-mix patching to level up a deck prior to waterproofing.

Concrete surface suitable for membrane application should be wood-float finish or better and be clean and free of oil, grease, curing compounds, dampness, frost, dust, or loose particles that could affect penetration of the adhesive and adhesion of HRM 714. Sand-blasting and vacuuming are recommended after which no traffic should be permitted in the area.

For proper surface conditioning application and techniques, contact W. R. MEADOWS technical services.

Cracks, Joints, Other Discontinuities ... In cracks up to 1/8" (3 mm) wide, construction joints, and changes in plane, where no movement is expected, fill cracks and joints and coat area with HRM 714 1/8" (3 mm) thick x 10" (250 mm) wide centered over the crack and embed a 6" (150 mm) strip of REINFORCING FABRIC HCR into the HRM 714 while it is still hot, ensuring that air is not trapped. Allow to cool before applying the final coat of HRM 714.

Cracks over 1/8" (3 mm) wide should be repaired with high density concrete and cover using a 9" (225 mm) wide, 30 mil thick REINFORCING FABRIC HCR embedded in a 1/8" (3 mm) x 12" (300 mm) wide coat of HRM 714 centered over the crack.

Expansion joints up to 1" (25 mm): Drape an 18" (450 mm) wide sheet of reinforced butyl or neoprene rubber (minimum 60 mils thick) into the joint in a "U" shape to a depth twice the width of the opening. Where joints are already filled with a sealant that may not be compatible with HRM 714, stop membrane application short of the expansion joint edge and embed sheeting over the joint, using a backer rope and extending at least 8" (20 mm) on each side of the expansion joint. Apply a 1/8" (3 mm) x 13" (330 mm) wide coating of HRM 714 to the deck on each side of the joint and place the rubber sheet into it, while the HRM 714 is still hot. Lap all end laps of reinforcing sheet 6" (150 mm) and seal with HRM 714. Allow to cool before applying the final coat of HRM 714 membrane.

Expansion joints 1" (25 mm) or more wide: refer to W. R. MEADOWS technical services or approved applicator.

Surface Conditioning ... Apply MEL-PRIME™ solvent-based adhesive from W. R. MEADOWS to surfaces that will be waterproofed at a coverage rate of 250 - 300 ft.²/gal (6.14 - 7.37 m²/L). Make sure surface dries to tack-free before application of HRM 714.

Flashing ... Wash surfaces of all metal, including flashings, vents, drains, etc., with solvent, dry with clean cloths, and condition with MEL-PRIME solvent-based adhesive. Allow MEL-PRIME to dry before applying HRM 714 membrane.

Vertical Surfaces ... Apply 1/8" (3 mm) coating of HRM 714 a minimum of 6" (150 mm) or more as required up vertical surfaces to a height which is greater than the maximum depth of water which may be ponded due to the operation of a controlled flow drain, temporary drain blockage, etc. Apply 1/8" (3 mm) thick HRM 714 coating 6" (150 mm) onto concrete deck and, while the HRM 714 is still hot, embed 6" (150 mm) wide REINFORCING FABRIC HCR (47 mil thick) placed 3" (75 mm) vertically and 3" (75 mm) horizontally. Allow to cool before applying the final coat of HRM 714 membrane.

Drains ... Coat area 16" (400 mm) wide around drain with HRM 714. Place REINFORCING FABRIC HCR (47 mils thick) over the coated drain flange, extending 12" (300 mm) around flange. Allow to cool before applying the final coat of HRM 714 membrane.

Compound Application ... Apply HRM 714 evenly by flowing onto the deck and spread with a squeegee to a minimum recommended thickness of 1/8" (3 mm) or more, as specified, covering all previously placed material over cracks, joints, flashings, etc.

HRM 714 may be applied to vertical and horizontal surfaces. Avoid air entrapment. The membrane should be uniform in thickness as possible and essentially free of visible pinholes and blisters. After completion of membrane application, complete successive steps as soon as possible.

When HRM 714 is applied over a steel deck overlaid with gypsum board or plywood, no adhesive is required. Cover joints between gypsum board or plywood sheets with a 6" (150 mm) wide spun-bonded polyester (10 mil) pressed into a 1/16" (1.5 mm) thick layer of HRM 714. Be sure to remove air pockets, then apply a 1/16" (1.5 mm) coat of HRM 714 over the entire area. A layer of 39" (991 mm) wide spun-bonded polyester (10 mil) reinforcement sheet should be applied over the hot membrane. Apply the reinforcement sheet parallel with the longer dimension of the gypsum board or plywood sheets. Lap the reinforcement 2" (50 mm) and bond lap with HRM 714. Apply a second layer of HRM 714 at a minimum thickness of 1/8" (3 mm) to completely embed the reinforcement fabric.

Protection ... Install PROTECTION COURSE from W. R. MEADOWS to protect the membrane from damage during construction or backfill operations. If a delay of 48 hours or more is anticipated in the application of the next phase of construction, flood coat the PROTECTION COURSE with roofing asphalt. Alternatively, place a temporary cover of polyethylene film over the HRM 714 membrane and keep free of traffic until PROTECTION COURSE can be installed and covered.

If a hot-mix asphaltic wearing surface is to be applied, place PROTECTION COURSE while the HRM 714 membrane is still tacky. Apply an emulsion primer tack-coat to PROTECTION COURSE and place the asphaltic surface promptly. The asphaltic pavement should be at least 2" (50 mm) thick. Alternatively, install 2 - 3" (50 - 75 mm) of no-fines concrete over PROTECTION COURSE to serve as a percolation layer which is stable and which will withstand construction traffic. This percolation layer improves drainage and prevents damage due to ice formation and is, therefore, preferable to the use of compacted screenings as an underlay for an asphaltic wearing surface.

Similarly, a no-fines concrete percolation layer is recommended under exposed concrete slabs and under landscaped areas. Cover the no-fines concrete with a filtration sheet, such as spun-bonded nylon (1.5 oz. per sq. yd.) to keep the fines from landscaping soil from clogging the percolation layer.

PRECAUTIONS

Do not leave permanently exposed. Do not apply to concrete surfaces which are not properly conditioned. Do not apply to lightweight concrete containing moisture.

Application of adhesive and membrane at ambient temperatures below 40° F (5° C) requires extra care in surface conditioning.

HRM 714 is not compatible with pitch or derivatives of coal tar.

LEED INFORMATION

May help contribute to LEED credits:

- EAp2: Minimum Energy Performance
- EAc2: Optimize Energy Performance
- MRc9: Construction and Demolition Waste Management
- EQc2: Low-Emitting Materials
- [For Healthcare and Schools (exterior-applied products) ONLY]

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



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.

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