



Between the World
and The Weather
Since 1928

Ram-Tough 250 VMA

Vertical Subgrade Waterproofing System

DESCRIPTION

The heart of the Barrett Ram-Tough 250 VMA (Vertical Membrane Assembly) is a fluid-applied rubberized asphalt membrane composed of SBS rubber polymers, specially refined unoxidized asphalt, recycled tire rubber and mineral filler. When applied it forms a completely monolithic and flexible rubbery waterproof barrier, without seams or joints.

The Ram-Tough 250 is a self-healing, elastomeric material with significantly better elongation, elasticity, low temperature flexibility, adhesion and toughness properties when compared to all other types of membranes.

After the Ram-Tough 250 membrane is in place, a layer of Ram 400PS, a polymer modified, polyester reinforced, self-adhering membrane is applied. When complete, this 190 mils thick waterproofing membrane prohibits water from getting under or through its multiple course application.

The unique physical properties of the Ram-Tough 250 VMA system offers superior performance and durability, even in the presence of continuous hydrostatic water pressure.

This system may qualify for LEEDS credits under certain conditions.

MATERIALS

- Ram Primer and Surface Conditioner
- Ram-Tough 250 Fluid Applied Waterproofing (125 mils)
- Ram 400PS - Self-Adhering SBS Polyester Membrane (1 ply)
- Ram 203 - Fiberglass Reinforced Protection Course (1 ply - optional)
- Ram Drain - Per project requirements (optional)
- Extruded Insulation - Per project requirements (optional)

PREPARATION FOR CONCRETE SURFACES

Concrete surfaces must be made reasonable smooth, dry, free of dirt, laitance, curing agents, debris and all other contaminants. Prior to installing the membrane, apply a coat of Ram Primer and Surface Conditioner at a rate of 300-500 SF/gal to all surfaces to be waterproofed. Allow to dry tack-free.

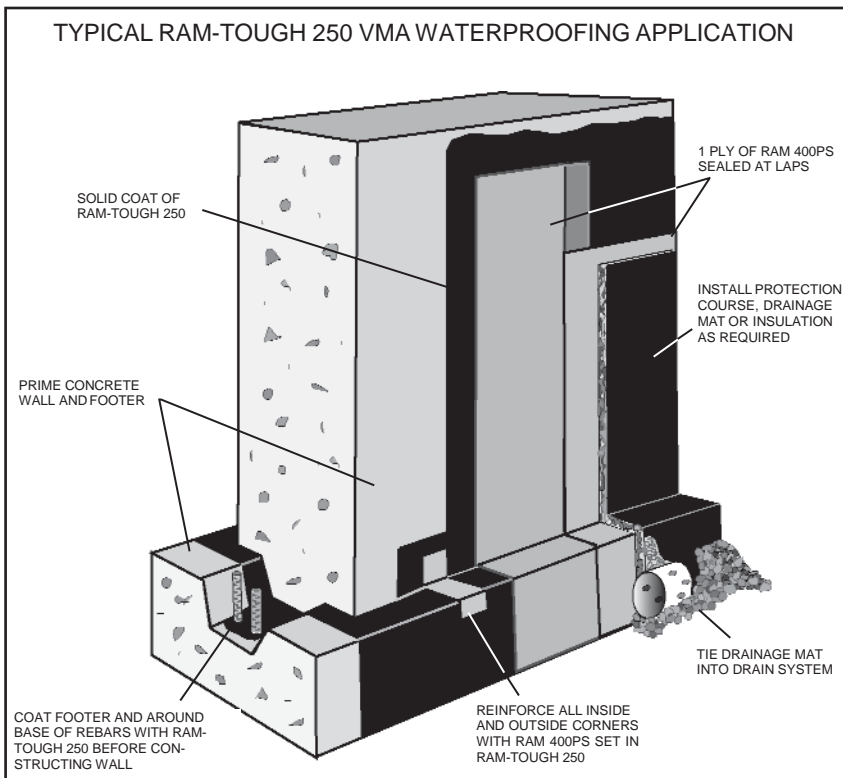
Before proceeding, treat all cracks, construction joints, expansion joints and wall penetrations in accordance with Barrett recommendations or approved details.

SEAL FOOTER/GRADE BEAM

Before the wall section is constructed, prime all surfaces of the footer and seal with Ram-Tough 250 membrane. Apply the Ram 250 around the base of each reinforcing rod, taking care not to get waterproofing materials more than 1 inch above the base of the reinforcing bars.

CORNER REINFORCEMENT

Once the wall section has been constructed and cured, clean the exposed membrane on the footer before making the tie-in. Prime outside wall surfaces. Reinforce all inside and outside corners using a 6 inch wide strip of Ram 400PS set in a continuous coat of hot applied Ram 250. Reinforce corners and projections before installing the primary wall membrane assembly. Position corner reinforcements a minimum of 3 inches onto both sides of the corner. Press into place to assure that it's tightly embedded into the cove and totally adhered.



APPLICATION OF WALL MEMBRANE

After the detail work is complete, coat the primed vertical primed surfaces with a continuous application of Ram-Tough 250 starting at the base of the outside edge of the footer to the top termination of the membrane application or to a point which can be easily reached.

While the Ram-Tough 250 is still warm, embed 1 ply of precut Ram 400 PS vertically in lengths up to 8 feet long. Remove the 3 inch zip-strip from the lap area of the preceding sheet before installing the next sheet. Lap exposed sheet 3 inches over the preceding sheet. On higher walls, apply membrane in two or more lifts with the upper overlapping the lower sheets by at least 3 inches. Remove the protective film from the top 3 inches of the lower course before overlapping. Roll membrane with a steel hand roller to assure total adhesion. Remove and repair all wrinkles, fishmouths or damaged membrane.

TOP EDGE TERMINATION

The top edge of the membrane shall terminate above grade level, mechanically fasten with a 1 inch termination bar, attached 8 inches on center. Seal the termination bar, the top edge of the membrane and all laps with a troweling of warm ram-Tough 250 before the end of each work day. Cover exposed above grade membrane using metal counter flashing or some other means of providing permanent protection from sunlight.

PROTECTION COURSE

The membrane assembly requires protection during the backfilling process which can be accomplished in several ways. The use of a drainage mat, and/or insulation can serve as a protection course. If drainage or insulation is not required, it is recommended that Ram 203 protection course be used as a minimum.

Ram 203 protection course can be adhered to the Ram 400PS by removing the plastic film from the 400PS and using the 400PS's outer surface as a temporary adhesive. Install the Ram 203 vertically, pressing it firmly against the Ram 400PS to assure adhesion. Lap each sheet 3 inches over the preceding sheet and seal with Ram-Tough 250 or Ram Mastic.

BACKFILLING

Backfilling should begin immediately. The fill shall be free of large rocks or debris which could damage the membrane during the backfilling operation. Start initial backfill operations by hand placement of fill against membrane surface. Carefully place subsequent backfill as per the project specifications.

GENERAL APPLICATION INFORMATION

Consult your Barrett Company representative for detailed specifications and application information.

PRODUCT PACKAGING INFORMATION

Ram-Tough 250

Ram-Tough 250 is packaged in 30 lbs. cartons (approx.), 75 cartons per pallet. Each block of material is wrapped in low density polyethylene film which will dissolve in the melting process. Only the cardboard carton remains for recycling.

Ram Primer and Surface Conditioner

Ram Primer and Surface Conditioner is packaged in recyclable 5 gal. pails.

Ram 400PS Self-Adhering SBS/Polyester Membrane

Roll Size - 125 sq. ft. (30 in. X 50 ft.) Roll

Weight - 50 lbs. (approx.)

Ram 203 Protection Course

Roll Size - 39 in. X 49 ft. (Net coverage 150 sq. ft. Roll)

Weight - 90 lbs. (approx.)

PRODUCT SAFETY INFORMATION

Ram-Tough waterproofing products offer no unusual health or safety risks for products of this nature. As with any roofing and waterproofing installation process, proper ventilation, clothing and eye protection is important.

For specific product information, contact the Barrett Company for a current Material Safety Data Sheets for their products. Obtain Material Safety Data Sheets from manufacturers whose materials may be used in conjunction with the Barrett waterproofing system. For installation safety information, consult the National Roofing Contractors Association, the Occupational Safety and Health Administration (OSHA) and any other informed sources.

The user should not assume that all safety measures are indicated or that other measures may not be required.

Note

All statements, information and data given herein are believed to be accurate and reliable, but are presented without guaranty, warranty or responsibility of any kind, expressed or implied, except as may be indicated herein. Statements or suggestions concerning possible uses of our products are made without representation or warranty that any such use is free of patent infringement and are not recommended to infringe any patent.

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