Hot Applied Rubber Modified Asphalt Waterproofing

Materials and Application
Hot Applied Rubber

- As is typical of waterproofing, detailing is completed prior to membrane application
  - All cracks treated
  - Flashings installed
- Membrane remains tacky so protection board is always used
Material Delivery to Job Site

- Cakes within 55 gal. Drums
  - Approximately 10 cakes of 50 lbs. Each per drum
- 50 lb. Cartons on a skid
  - Typically 48 cartons per skid
Heating of Membrane Material

- Must use a melter – not a kettle - to reduce heater wall temperatures.
- Can be an oil jacketed or an air jacketed melter.
- Melter has a mechanical agitator.
- Two thermometers – one for the membrane and one for the oil bath.
Substrate

- Concrete surfaces must be clean, dry, and free of laitance (thin layer of unbonded cement paste), frost, dust, dirt, or objectionable surface treatments.

- Concrete must be primed for adhesion:
  - Approximately 3 – 5 squares per gallon
  - Allow to dry
  - Install membrane shortly after primer is dry to prevent dust or dirt contamination
Applying Hot Rubber

- Do not overheat membrane – maximum of about 420°F (215°C).
- Pour out of melter into 5 gal. Bucket
- Pour out onto primed concrete surface
- Spread with squeegee
Hot Rubber Systems

- Single layer application
  - Treat all cracks and defects with hot rubber and polyester fabric reinforcement
  - Cover deck and prepared cracks with uniform layer of hot rubber (min. 125 mils)

- Fully reinforced system
  - Apply initial coat of membrane
  - Follow immediately with reinforcement fabric and full second coat (min. 125 mils)
Top Side Protection

- Apply protection as soon as possible
- Protection can be pre-manufactured planks of 1/8th to ¼ inch thickness or modified or unmodified roll goods. See manufacturer
Complete with Top Covering

- Can pave over protection layer with concrete or macadam covering
- Plazas may include drainage layer, insulation, pavers or pavement
- Green roofs would include soil and plantings
- PMRs are usually stone surfaced
Hot Applied Rubber
Advantages and Disadvantages

- Advantages
  - 100% solids – not affected by rain immediately after application
  - Remains pliable
  - Liquid nature conforms well
Hot Applied Rubber

Advantages and Disadvantages

- Disadvantages
  - Application rate controlled by applicator
  - Difficult on vertical walls
  - Sensitive to moisture in substrate
Details

- As with all waterproofing systems, check with the manufacturer for specific details.
- Following are some typical manufacturer details
FLEX-FLASH UN OR
FLEX-FLASH F

MONOLITHIC
MEMBRANE 6125

HYDROFLEX 30 OR OTHER
APPROVED PROTECTION

CONDUIT

PIPE/VENT

4" MIN.

NOTES: SOME PIPE MATERIALS (PVC, COPPER, BRASS) MAY REQUIRE ROUGHENING/SANDING,
IN ADDITION TO PRIMING W/SURFACE CONDITIONER, FOR PROPER ADHESION OF MM6125.

METAL PIPES MUST FREE OF ALL OIL AND RUST.
NOTES: PENETRATION MUST BE PROPERLY SECURED TO STRUCTURE TO PREVENT VERTICAL OR LATERAL MOVEMENT.

SOME PIPE MATERIALS (PVC, COPPER, BRASS) MAY REQUIRE ROUGHENING/SANDING, IN ADDITION TO PRIMING W/SURFACE CONDITIONER, FOR PROPER ADHESION OF MM6125.

METAL PIPES MUST BE FREE OF ALL OIL AND RUST.
NOTES: CONCRETE AROUND DRAIN SHOULD BE DEPRESSED (SEE DRAWING) TO PROMOTE POSITIVE WATER DRAINAGE.

REINFORCEMENT SHALL BE ONE SHEET EXTENDING A MINIMUM OF 6" BEYOND THE DRAIN FLANGE ON ALL SIDES AND SECURED BY THE CLAMPING RING TO THE DRAIN.

ALL DRAINS ARE REQUIRED TO HAVE FLASHING CLAMPING RING ASSEMBLIES.

DRAIN MUST BE MAINTAINED FREE TO WEEP AT MEMBRANE LEVEL.
MONOLITHIC MEMBRANE 6125

FLEX-FLASH UN OR OTHER APPROVED FLASHING

HYDROFLEX 30 OR OTHER APPROVED PROTECTION

3"  4" MIN.

3"

FLEX-FLASH UN OR OTHER APPROVED FLASHING

MONOLITHIC MEMBRANE 6125

HYDROFLEX 30 OR OTHER APPROVED PROTECTION

3"  3"

NOTES: DETAIL TO ACCOMODATE MAX. 50% TOTAL MOVEMENT. BACKER ROD AND SEALANT ARE RECOMMENDED IN JOINT PRIOR TO MM6125/FLEX-FLASH UN INSTALLATION.

**Expansion Joints Up To 1"**
NOTES:

1. Diameter of foam rod or tube should be 1 inch larger than maximum joint opening.
2. Incorporate a fold in the second sheet of Flex-Flash Un to accommodate movement of the joint. A bond breaker may be required between the folds.
3. Detail designed to accommodate max. 50% total movement.
4. Whenever possible, the detail should be curbed or otherwise constructed to shed water away to both sides.
5. Additional protection/cover may be required depending on overburden.

Expansion Joints 1" 5 2"
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