

GUIDE SPECIFICATIONS

SECTION 07500 ELASTOMERIC BUILT-UP ROOFING CP-80 · 3P · I · CS COLD PROCESS

PART I - GENERAL REQUIREMENTS

1.01 RELATED SECTIONS

Section 06100 Carpentry
Section 07220 Roof Insulation
Section 07600 Sheet Metal
Section 07710 Roofing Accessories
Section 07900 Caulking & Sealants

Edit to Project Conditions

1.02 SUBMITTALS

- A. Submit Manufacturer's written approval or license of applicator for installation of the herein specified roofing system.
- B. Submit Manufacturer's sample warranty and Intent to Warranty Certification.
- C. Submit most recent copy of Manufacturer's literature applicable to products and specifications to be used, including applicable flashing details.
- D. Submit three sheet samples, approximately 8" x 10", of roof insulation and underlayment material.
- E. Submit evidence of Manufacturers history of production for the system specified herein. A minimum of ten (10) years experience is required. Documentation shall include job lists with project size, Architect of record, installing Applicator, telephone numbers and contact names, if requested.
- F. Submit, in duplicate, certification from the primary Manufacturer, properly attested by a corporate officer, stating that all materials being supplied comply with the specifications and requirements of the contract documents, including conformation with all federal, state, and local building codes including all U.S.C. Buy American requirements. Foreign materials will not be allowed on this project.

1.03 QUALITY ASSURANCE

- A. All the materials specified herein are cited as a minimum standard of quality, and shall not preclude consideration of equal or superior materials. All suggested "equivalent materials" or other substitutions are to be submitted to the Architect for consideration a minimum of ten (10) days prior to bid date. Submittal shall include all evidence of compliance or superiority of material from the proposed substitute Manufacturer. If substitution is approved, an addendum will be issued to all bidders for their consideration of the proposed substitute Manufacturer. Determination of equivalency of all substitutions shall rest exclusively with the Architect and such decision shall be final.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to jobsite on pallets. Package labels shall indicate material name, production date and product code.
- B. Store materials in dry, protected areas in an upright position. Control temperature of storage areas in accordance with Manufacturer's instructions. Protect materials from moisture.

1.05 PROJECT CONDITIONS

- A. Follow local, state and federal regulations, safety standards and codes. When a conflict exists use the stricter requirements.
- B. Do not apply roofing materials when water in any form (i.e. rain, dew, ice, frost, snow, etc...) is present on the deck.
- C. Ensure roof deck is structurally sound to support the live and dead load requirements of roofing system and sufficiently rigid to support construction traffic.
- D. All air intakes on or near the roof shall be covered, all doors and windows closed and contractor shall provide other engineering controls as may otherwise be necessary on this project to prevent odors from entering the building. All engineering controls shall be instituted as agreed to with the Owner.

1.06 CODE COMPLIANCE

- A. It shall be the roofing contractor's responsibility to ensure that all work done under this project shall be in compliance with applicable Code Requirements including obtaining any required permits prior to the start of the job. A Underwriter's

Laboratory Class A approval for the roofing system is required.

1.07 WARRANTY

- A. Prior to project close out, the roofing contractor shall submit the Manufacturer's pre-approved 15 year labor and material warranty.

PART II - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Products manufactured or accepted by the Barrett Company or approved equal in conformance with Paragraph 1.03.

2.02 ROOFING MATERIALS

- A. Roofing Membrane System

Project Specification Standard of Quality: Barrett Co. **ram-Tough** No. CP-80 · 3P · I · CS.

Materials required per 100 sq. ft. of roof area:

Poly Felt 155 VP	3 ply
CP-80 Elastomeric Bitumen	8 gallons
ram 306	1 ply cap sheet

- 1. Interply Adhesive (Cold Process Mastic): Barrett **ram** CP-80 Cold Process Mastic, SBS Kraton Modified Asphalt Mastic for cold application process built-up roofing utilizing Barrett roofing felts, and having the following performance values:

<u>Test</u>	<u>Method</u>	<u>Specifications</u>
Asbestos content	STM D-267	None
Density @ 77 degrees F	ASTM D-1475	8.61 lb/gal
Flash point	ASTM D-3278	>100 deg F
Solids by weight	ASTM D-2823	73%
Asphalt content, min	ASTM D-146	51%

Uniformity & Consistency	ASTM D-4479	Pass
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Base asphalt:

Softening point	ASTM D-36	170-180 deg.
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Penetration	ASTM D-5	10-15 mm
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2. Ply Sheet: Poly Felt 155 VP, polyester reinforced ply sheet shall comply with the following minimum specifications:

<u>Test</u>	<u>Method</u>	<u>Typical Results</u>
Elongation, %	ASTM-D-4830	75 MD, 85 CD
Flex Fatigue	ASTM D-8B	10,000 cycles
Weight	ASTM D-3776	3.5 oz / Sq.Yd.
Tear Strength, lb	ASTM D-4830	45 MD. 36 CD
Tensile, lb	ASTM D-4830	119 MD, 90 CD

3. Cap and Sheet Flashing: **ram 306**, Kraton® SBS based flashing with granule surface cap sheet shall comply with the following minimum specifications:

<u>Description</u>	<u>Granule Surface Cap Sheet</u>
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Thickness	4mm
Surfacing	ceramic granules
Reinforcement	polyester mat
Polymer modifier	Kraton® SBS

<u>Test</u>	<u>Method</u>	<u>Typical Results</u>
Breaking Strength	ASTM D-412	MD: 119 lbs/in. XD: 88 lbs/in.
Elongation	ASTM D-412	50%
Cold Bend	CGSB 37 GP56M	-20°F

B. Related Materials

1. Primer: **ram Primer/Surface Conditioner** shall comply with ASTM D-41.
2. Mastic: **ram Mastic**, flashing mastic shall be trowel grade SBS modified cold process cement.
3. Pipe and Stack Flashings: Four pound lead closed boot, supplied by primary materials Manufacturer and installed in accordance with published flashing details.

4. Cant Strips - Impregnated fiber cant strip in compliance with ASTM C-208 with 4 inch face approved by Manufacturer.
5. Nails: As specified or recommended by the fastener Manufacturer for specific application and accepted by membrane Manufacturer.
6. Roof Insulation - See Section 07220. Roof Insulation fasteners shall be FM approved, non back-out design with plastic washers.
7. Sheet Metal - See Section 07600.

PART III - EXECUTION

3.01 PREPARATION

- A. Remove all trash, loose debris and ponding water from roof deck. Do not proceed with any work if temperatures are below 40°F.

3.02 APPLICATION

A. Roofing Membrane

1. After new insulation has been properly installed, starting at the low points of the roof, set three plies of Poly Felt 155 VP in cold process CP 80 at the rate of 2 gallons minimum per 100 SF, per ply, overlapping starter plies in shingle fashion. At least three plies of Poly Felt shall cover the roof surface at every point.

Interply adhesive shall provide a continuous film and shall have no voids, holidays, fishmouths or wrinkles. Broom to ensure complete embedment of all plies. In no place shall felt touch felt. Complete installation of all plies each day and coat finished plies each night.

B. Rooftop Equipment & Pitch Pockets

1. All air conditioners and mechanical roof top units shall be counter-flashed as per detail drawings.

C. Roofing Drains

1. All drains, new and existing, shall be flashed with new sheet lead flashing weighing 4 lbs/sq.ft., 36 inches square, set in **ram** Mastic over new roofing and flashed with two additional plies of Poly Felt 155 VP and CP-80 bitumen.

D. Base Flashings

1. Bridge all junctions of vertical and horizontal surfaces with 45° cant strips. All roofing plies shall extend a minimum of 2 inches above the top of cant.
2. The flashing system shall be a component of, or attached to, the roof deck or roof deck system. Apply flashing only after the built-up roofing has been installed. Starting with two plies of Poly Felt 155 VP overlapped 4 inches and 8 inches onto the horizontal roof surface and follow with one ply of **ram**

306, overlapped 12 inches onto the horizontal roof surface, with side laps off-set 18 inches from Poly Felt 155 VP backer sheets. Minimum height for base flashing is 8 inches, and counter flashing must be provided. All flashing plies to be set in **ram** Mastic.

Base flashings secured with termination bar shall be mechanically fastened 8 inches, on center, with termination bar and fasteners approved for the substrate receiver.

E. Surfacing

1. After the membrane installation has been approved by the Manufacturer install ram 306 in a uniform application of cold process elastomeric bitumen at the minimum rate of 2 gallons per 100 SF.

3.03 FIELD QUALITY CONTROL

A. Roof Cuts:

Test cuts may be taken by a representative of the Architect or Manufacturer at their discretion. Test cuts should be 3 inches by 48 inches (1 square foot) and should run perpendicular to direction of the felts to provide a representative sample of the roofing work. Test cuts generally will not exceed 1 per 100 squares of roof area.

1. Follow field audit criteria outlined by Manufacturer.
 2. Send roof cuts to SRI, Madison, Wisconsin for laboratory examinations. Provide allowance of \$500.00 per test required in bid proposal.
 3. Repair sampled areas by filling in the cut-out area, then use a "feathered in" patch consisting of same number of plies as in the roof specification following Manufacturer's procedures.
- B. Correct deficiencies in roof, if any, (determined by roof cut analysis) as prescribed by Manufacturer and approved by Architect.

3.04 CLEANING

- A. Remove equipment, trash, debris, and any excess material from the jobsite.
- B. Repair any damage and remove any stains caused by work of this Section.

3.05 PROTECTION

- A. General Contractor and the Owner shall protect finished roof areas from damage during subsequent construction not related to roofing.

MAINTENANCE:

Semi-annual inspections and a systematic maintenance program are recommended to the Owner and Architect. Consult your Barrett Representative or Barrett Approved Applicator for further information.

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