

SECTION 07 53 00

ELASTOMERIC SHEET ROOFING

1 PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section.

1.2 SECTION INCLUDES

- A. Elastomeric Sheet Membrane Conventional Roofing System, insulation, roofing membrane expansion joints, mechanically attached.

1.3 SYSTEM DESCRIPTION

- A. Elastomeric sheet membrane roof assembly including structure and ceiling under to conform to requirements for a UL Class A fire rated assembly, and FM I 90 requirements for wind uplift resistance.

1.4 SUBMITTALS

- A. Product Data: Provide characteristics on membrane materials, flashing materials, insulation and walkway pads.
- B. Roof Inspection Report: Submit inspection report by roofing membrane manufacturer's representative following completion of installation.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with UL 790 (Underwriters Laboratories Inc.) Class A Fire Hazard Classification. FM 4470 (Factory Mutual Engineering Corporation) - Roof assembly Classification wind uplift requirement of I-90, FM Construction Bulletin 1-28, Class 1 A Construction.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not install membrane during inclement weather or when air temperature may fall below 40 degrees F.

1.7 WARRANTY

- A. Provide fifteen (15) year warranty under provisions of Section 01 00 00 including coverage of materials and installation and resulting damage to building resulting from failure to resist penetration of moisture.

2 PART 2 PRODUCTS

2.1 MEMBRANE MATERIALS

A. Manufacturers:

1. Carlisle Syntec Systems.
2. Celotex Corp.
3. Dunlop Construction Products Co.
4. Firestone Building Products Co.
5. Goodyear Tire and Rubber Co.
6. Schuller Roofing Systems.

B. Membrane: EPDM; 0.060 inch thick, reinforced.

C. Seaming Materials: As recommended by membrane manufacturer.

2.2 MEMBRANE FASTENING

A. Insulation Adhesive: Type recommended by insulation manufacturer.

B. Mechanical Fasteners: Manufacturer's standard type for application intended.

2.3 INSULATION MATERIALS

A. Manufacturers:

1. As approved by manufacturer of roofing membrane.

B. Insulation: ASTM C 1289-95 Type II, polyisocyanurate closed cell foam core with manufacturer's standard facing; thicknesses as indicated, square edges, R value of 6.0 per inch thickness. Provide tapered sections as required to ensure positive drainage to roof drains.

C. Separation Sheet: As recommended by roofing membrane manufacturer for application intended.

D. Insulation Adhesive: As recommended by insulation manufacturer.

2.4 ACCESSORIES

A. Flexible Flashings: Same material as membrane, black color; manufactured by roofing membrane manufacturer.

B. Roof Edge/Fascia: two part interlocking aluminum fascia system meeting requirements for wind uplift rating, with Kynar finish, color as selected by Architect; Firestone FM 120, or equal.

C. Prefabricated Control or Expansion Joint Flashing: Sheet EPDM with foam filler, and metal edge flashings: Schuller Expand-O-Flash or equal.

D. Fiber Cant Strips: Asphalt impregnated wood fiberboard.

- E. Roofing Fasteners: Galvanized or non-ferrous type as recommended by membrane manufacturer.
- F. Sealants: As recommended by membrane manufacturer.
- G. Walkway Pads: As recommended by membrane manufacturer

3 PART 3 EXECUTION

3.1 PRE ROOFING CONFERENCE

- A. Conduct pre-roofing conference with all trades affected by roofing installation, Owner and Architect. Record discussions and distribute to all parties.

3.2 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work; deck is clean and smooth, free of snow or ice; properly sloped to drains.
- B. Verify roof openings, curbs, and protrusions through roof are solidly set; wood cant strips and reglets are in place.

3.3 PREPARATION

- A. Fill concrete surface honeycomb and variations with latex filler.

3.4 INSULATION APPLICATION

- A. Mechanically fasten insulation to deck in accordance with insulation manufacturer's instructions to meet wind uplift rating.
- B. Lay second layer of insulation with joints staggered from first layer and mechanically fasten in accordance with insulation manufacturer's instructions.
- C. Minimum Total Insulation Thickness: As required to achieve an average insulation R-value of 24.
- D. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.

3.5 MEMBRANE APPLICATION

- A. Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- B. Roll out membrane. Work out air bubbles, wrinkles, and fish mouths.
- C. Overlap edges and ends and solvent seal watertight.
- D. Install mechanical fasteners in accordance with manufacturer's instructions and UL and FM ratings.

- E. Seal membrane to adjoining surfaces.
- F. Shingle joints on sloped substrate in direction of drainage. Apply joint sealant.
- G. Continue membrane up vertical surfaces minimum 8 inches unless otherwise noted. Reinforce membrane with multiple thickness of membrane material over joints.
- H. Seal items penetrating membrane with counter flashing membrane material. Install membrane flashings. Seal watertight to membrane.
- I. Place walkway units at locations indicated.

3.6 FLASHINGS AND ACCESSORIES

- A. Apply flexible flashings to seal membrane to vertical elements.
- B. Install roof edge trim/fascia in accordance with manufacturer's instructions. Seal to roof membrane.
- C. Install prefabricated roofing expansion control joints to isolate roof into areas as indicated in accordance with manufacturer's instructions.
- D. Coordinate installation of roof drains sumps and related flashings.
- E. Seal flashings and flanges of items penetrating membrane.

3.7 INSPECTION

- A. Conduct inspection of completed installation with representative of roofing membrane manufacturer. Identify any deficiencies and make corrections as directed by representative. Submit reports to Architect/Engineer and Owner.

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