
SECTION 07 28 00

WEATHER BARRIER/UNDERLAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide weather barrier/underlayment air and water barrier systems for siding, sloped roofing, flashing and sheet metal, and penetrations with accessories as required for complete watertight installation.
 - 1. Stucco Wall Underlayment: Provide two layers air-infiltration barrier underlayment system with flashing for wall applications, with related concealed metal flashings and accessories for complete airtight and watertight installation.
 - 2. Metal Panel Wall Underlayment: Provide vapor permeable self-adhering sheet underlayment and flashing for exterior wall applications, with related concealed metal flashings and accessories for complete airtight and watertight installation.
 - 3. Flashings and Sheet Metal Underlayment: Provide self-adhering sheet membrane underlayment at flashings and sheet metal, with accessories as required for complete watertight installation.
 - 4. Self-Adhering Sheet Membrane (SASM) Flashing at Penetrations: Provide SASM flashing for around penetrations through building paper including windows and doors, with accessories as required for complete watertight installation.
- B. Related Sections:
 - 1. Section 07 60 00: Exposed metal flashing.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Weather Barriers: Provide weather barrier/underlayment systems which, with other building components, comply with applicable code requirements for air barriers and water barriers.
 - 1. Air Barriers: Air barriers shall be as defined by applicable Energy Code requirements and shall include standard exterior wall components and air seal joint sealants specified in Section 07 90 00 – Joint Sealants.
 - 2. Water Barriers: Water barriers shall be as defined by applicable Building Code requirements and shall include vapor permeable systems with or without rainscreen barriers intended to extend amount of water drained to exterior.
 - a. Rainscreen systems can also provide protection from ultra-violet degradation of underlayment where open joint systems are used.

3. Interior Vapor Retarders: Where specifications require foil faced vapor retarders as part of building thermal insulation system, intent is to prevent migration of spores from mold and mildew into interior building spaces.
 - a. Intent is to provide air barrier and vapor retarder on interior surface while allowing vapor to move through exterior wall vapor permeable surfaces, while vapor permeable water barriers are maintained at exterior side of wall.
 4. Self-Adhering Flexible Flashings: Intent of flexible flashings at window openings, door openings, and other wall penetrations is to ensure water cannot move from exterior surface past water barriers and into building.
- B. Pre-Installation Meeting: Convene one week prior to commencing work; require attendance of parties directly affecting underlayment.
1. Review procedures and coordination required with related work.

1.3 SUBMITTALS

- A. Product Data: Furnish manufacturer's literature for each type of underlayment.
- B. Samples: Furnish samples of each material.

1.4 QUALITY ASSURANCE

- A. Sustainability Requirements: Comply with *CALGreen* requirements including those relative to finish material pollution control for adhesives.

1.5 WARRANTY

- A. Extended Correction Period: Provide for correcting failure of system to resist damage from anticipated sources including damage from water penetration. Repair system and pay for or replace damaged materials and surfaces.
 1. Period: Two years.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. System Description: Provide weather barrier/underlayment air and water barrier systems for siding, sloped roofing, flashing and sheet metal, and penetrations with accessories.
- B. Regulatory Requirements: Provide materials conforming to applicable air quality management district limitations on volatile organic compound (VOC) emissions.

- C. Stucco Wall Underlayment: Provide two layers water-vapor permeable underlayment system as follows.
 - 1. Manufacturers:
 - a. DuPont Company/Tyvek StuccoWrap.
 - b. Biberweb, Inc./Typar StormWrap.
 - c. Substitutions: Refer to Section 01 25 00.

- D. Metal Panel Wall Underlay: Provide vapor permeable water barrier type self-adhering sheet underlayment system for complete watertight installation as recommended by manufacturer for substrates and applications indicated.
 - 1. Manufacturers:
 - a. GCP Applied Technologies (Grace)/Perm-A-Barrier VPS Self-Adhering Sheet.
 - b. Henry Company/Blueskin SA and SA HT Air and Weather Barrier.
 - c. Carlisle Corp./CCW 705 MSDS.
 - d. Substitutions: Refer to Section 01 25 00.
 - 2. Provide specific membrane types as recommended by system manufacturers for each type of application.

- E. Sheet Metal and Flashing Underlayment: Self-adhering rubberized sheet membrane with primers and seam sealers as required for complete watertight installation; type as recommended by manufacturer for substrate and for applications indicated.
 - 1. Manufacturers:
 - a. GCP Applied Technologies (Grace).
 - b. Henry Company.
 - c. Carlisle Corp.
 - d. Protecto Wrap Company.
 - e. Substitutions: Refer to Section 01 25 00.
 - 2. Provide specific membrane types as recommended by system manufacturers for each type of application.

- F. Self-Adhering Sheet Membrane (SASM) Flashing at Penetrations: SASM with primers and seam sealers as required for complete watertight installation; type as recommended by manufacturer for substrate and for applications indicated.
 - 1. Manufacturers:
 - a. GCP Applied Technologies (Grace).
 - b. Henry Company.
 - c. Carlisle Corp.
 - d. Protecto Wrap Company.
 - e. Substitutions: Refer to Section 01 25 00.
 - 2. Provide specific membrane types as recommended by system manufacturers for each type of application.

- G. Concealed Metal Flashings Integral with Underlayment: Minimum 26 gage thick steel with minimum 0.90 oz/sq.ft. galvanized coating; ASTM A653.
 - 1. Fasteners: Standard round wire type of hot dipped galvanized steel; minimum 19/64" head diameter and 0.104" shank diameter; minimum 7/8" long.
- H. Bituminous Paint: Acid and alkali resistant type; black color.
- I. Accessories: Provide as recommended by underlayment manufacturers for specific applications.
 - 1. Plastic Cement: Cutback asphaltic type with mineral fiber components, for sealing and coating flashings; free of toxic solvents and free of asbestos. Capable of setting within 24 hours at temperatures of approximately 75 degrees F and 50% R.H.

2.2 FLASHING FABRICATION

- A. Fabricate metal flashings as recommended by Sheet Metal and Air Conditioning Contractors National Association (SMACNA) "Sheet Metal Manual".
- B. Form flashings to drain water to exterior at roofing and siding construction for penetrations, sill and header flashings.
- C. Form sections square, true and accurate to size, in maximum possible lengths and free from distortion and other defects detrimental to appearance or performance.
- D. Hem exposed edges of metal flashings minimum 1/4" on underside.
- E. Apply bituminous paint on concealed surfaces of metal flashings.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Install underlayment over surfaces that are dry, free of ridges, warps and voids that could damage paper.
- B. Coordinate installation with installation of components and items projecting through underlayment.

3.2 FLASHINGS INSTALLATION

- A. Install flashings as recommended by Sheet Metal and Air Conditioning Contractors National Association (SMACNA) "Sheet Metal Manual".
- B. Weatherlap joints minimum 2" and seal with plastic cement; secure in place.
- C. Fastenings: Concealed in completed installation.

3.3 UNDERLAYMENT INSTALLATION

- A. Install weather barrier/underlayment in accordance with installation instructions and recommendations of each manufacturer and of manufacturers of products to cover weather barrier/underlayment; comply with applicable code requirements.
 - 1. Stucco Walls: Provide two-layers underlayment specified.
 - 2. Metal Wall Panels: Provide one-layer sheet membrane underlayment.
 - 3. Flashing and Sheet Metal: Provide one-layer sheet membrane underlayment.
 - 4. Penetrations: Apply layer of self-adhering sheet membrane extending minimum 18" from penetrations, including windows and doors; start at bottom of penetration and weatherlap joints.
 - a. Apply top layer over metal flashing to direct water to exterior.
 - 5. Weatherlap joints as recommended by system manufacturer.
 - 6. Secure underlayment in place, stagger joints between sheet membrane layers; lap ends minimum 6"; stagger end joints.
- B. Stucco Underlayment: Prime substrates and roll sheet membrane underlayment smooth, firmly and completely to surfaces indicated, with no fishmouths or bunches of material.
 - 1. Weatherlap items projecting through underlayment and seal with plastic cement.
- C. Sheet Membranes: Weatherlap items projecting through sheet membrane underlayment and seal with sealer recommended by sheet membrane underlayment manufacturer.

END OF SECTION