SECTION 07 31 00

ROOFING UNDERLAYMENT

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\*\* NOTE TO SPECIFIER \*\* TYPAR; sheathing membrane, air barrier, header wrap.   
  
This section is based on the products of TYPAR, which is located at:  
9335 Harris Corners Pkwy. Suite 300  
Charlotte, NC 28269  
Tel: 704-697-5100  
Email: [request info (info@typar.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=TYPAR&coid=35127&rep=&fax=&message=RE:%20Spec%20Question%20(07312fib):%20%20&mf=)  
Web: <http://www.typar.com>   
  
 [ [Click Here](https://www.arcat.com/arcatcos/cos35/arc35127.html) ] for additional information.  
  
  
   
 The Typar System is developed and marketed by Berry Plastics, one of the world's largest international non-woven fabrics and product innovation groups. In addition to construction materials, Fiberweb produces a complete range of non-woven products used in a variety of applications including landscaping products, geo textiles, filtration, hygiene, home care, home furnishings, electrical, medical and more.

1. GENERAL
   1. SECTION INCLUDES
      1. High-strength polypropylene roofing underlayment.
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete sections below not required for project; add others as required.

* + 1. Section 06 10 00 - Rough Carpentry.
    2. Section 07 31 29 - Wood Shingles.
    3. Section 07 62 00 - Sheet Metal Flashing and Trim.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from list below not required for project.

* + 1. ASTM D 1682 - Standard Methods of Test for Breaking Load and Elongation of Textile Fabrics.
    2. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials.
  1. SUBMITTALS

\*\* NOTE TO SPECIFIER \*\* Delete paragraphs below not required for project.

* + 1. Submit under provisions of Section 01 30 00.
    2. Product Data: Manufacturer's data sheets on each product to be used, including:
       1. Preparation instructions and recommendations.
       2. Storage and handling requirements and recommendations.
       3. Installation and maintenance methods.
    3. Test Results: Submit copies of test results showing performance characteristics equaling or exceeding those specified.
    4. Verification Samples: For each finish product specified submit 12 inch (30.5 cm) square sample for approval by the Architect.
  1. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Delete paragraphs below not required for project.

* + 1. Manufacturer Qualifications: Obtain primary materials from a single manufacturer regularly engaged in manufacturing building wraps. Obtain secondary materials from a source acceptable to the primary materials manufacturer.
    2. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of two years demonstrated experience in installing products of the same type and scope as specified.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials and products in unopened factory labeled packages.
     2. Store and handle in strict compliance with manufacturer's instructions and recommendations.
     3. Prevent damage or contamination to materials by construction activities.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: TYPAR, which is located at: 9335 Harris Corners Pkwy. Suite 300; Charlotte, NC 28269; Tel: 704-697-5100; Email: [request info (info@typar.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=TYPAR&coid=35127&rep=&fax=&message=RE:%20Spec%20Question%20(07312fib):%20%20&mf=); Web: <http://www.typar.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
    3. Obtain products from a single manufacturer.
  1. MATERIALS

\*\* NOTE TO SPECIFIER \*\* Delete paragraph below if not required for project.

* + 1. High Strength Polypropylene Roofing Underlayment: Surround SR Underlayment, a Typar Brand with the following characteristics.
       1. Basis Weight: 3.35 oz/sq.yd.
       2. Tensile Strength ASTM D 1682: MD 117 lbsf CD 125 lbsf.
       3. Water Vapor Transmission Rate: ASTM E 96A 0.41 perms.
       4. Components: Polypropylene with polyolefin coating.
  1. ACCESSORIES

\*\* NOTE TO SPECIFIER \*\* Manufacturer recommends plastic cap mechanical fasteners for use with substrate of wood, insulated sheathing board and exterior gypsum.

* + 1. Mechanical Fasteners: Plastic cap nails as recommended by manufacturer.
    2. Flashing: Typar Flashing BA, Typar Flashing RA and/or Typar Flashing Flex as applicable; for use at chimneys, vents and dormers.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instruction.
      2. Sheet Materials:
         1. Repairs to the deck or sheathing should be completed and the area swept clean before installation. Every person working on the roof shall fully understand and comply with the safety precautions within this guide.
         2. In severe climates, install Surround SR Underlayment after installing a water and ice protective membrane. Install a drip edge along the eaves before applying underlayment and along the rakes after applying underlayment.
         3. Use 1 inch (25 mm) diameter plastic cap roofing or underlayment nails to fix Surround SR Underlayment in position. Drive nails squarely into the deck and flush with the underlayment. Staples should not be used. Using pneumatic staple guns is not recommended by manufacturer.
      3. First Course:
         1. Beginning at a bottom corner of the roof, lay Surround SR Underlayment in horizontal courses with printed side up.
         2. Unravel 2 or 3 feet (0.6 m to 0.9 m) of the roll and position it to be rolled across the bottom of the roof, even with the eaves with a 3/8-inch (9.5 mm) overhang.
         3. In critical areas where peal-n-stick ice and water shield is not along eaves or in valleys at 24 inch (610 mm) overlap is suggested.
         4. Maneuver into position so it covers the deck right up to the rake but not over the sides of the building. Drive plastic cap roofing nails into the top corner.
         5. Pull roll, straighten, and align along the eaves. Ensure there are no wrinkles. Nail at top with 1 inch (25 mm) plastic cap roofing nails spaced 8 inches (203 mm) apart. Nail middle and bottom simultaneously with a pattern of nails 24 inches (610 mm) apart.
         6. Roll out toward the other end of the roof and repeat the nailing pattern.
         7. Extend over the rake and cut with a utility knife. Trim away any excess that overhangs the rake to complete the first course of underlayment.
         8. Overlap ends of rolls by 6 inches (152 mm) and drive nails every 4 inches (102 mm) at overlap.
         9. Never walk on Surround SR Underlayment that is not securely nailed down.
      4. Second Course:
         1. Position the next course so it overlaps the first by 4 inches (102 mm). Use the white lines printed on Surround SR Underlayment as a guide for lining up the courses and drive nails every 4 inches (102 mm) at the overlap.
         2. The bottom of the second course should be on top of the first (lower) course so moisture will flow over the layers.
         3. Repeat the procedure of laying the first course of Surround SR Underlayment.
         4. On slopes of less than 3:12, overlap by 20 inches (508 mm).
      5. Ridge:
         1. Lay in courses over the remainder of the deck.
         2. Lap top course at least 6 inches (152 mm) over the roof ridge.

\*\* NOTE TO SPECIFIER \*\* On homes where eaves and rake are visible from the ground, a drip edge sets off the area where siding and shingles meet.

* + 1. Drip Edge:
       1. Install drip edge along the eaves after applying adhesive membrane (if installed) before applying Surround SR Underlayment.
       2. Install along the rakes after applying Surround SR and under flashings.
       3. Shingles typically overhang the drip edge by 1 inch (25 mm) at the eaves and rake.
    2. Fasteners:
       1. Use plastic cap roofing nails to apply Surround SR Underlayment to the deck of a mansard roof. Trim to fit tightly against the window beneath the flashing.

\*\* NOTE TO SPECIFIER \*\* On some asphalt roofs, shingles are woven across valleys, eliminating the need for flashing. Delete if not required for project.

* + 1. Valleys Lined with Surround SR Underlayment, a Typar Brand:
       1. Line valleys with a vertical length of Surround SR down the center before applying horizontal sections of underlayment.
       2. Overlap sections by 20 inches (508 mm) to ensure water will run over the top of the liner.
       3. Cut horizontal sections at an angle as the center of the valley is reached and overlap by at least 8 inches (203 mm).
       4. Do not drive nails within 6 inches (152 mm) of the center line.

\*\* NOTE TO SPECIFIER \*\* Valleys require sturdy flashing because they carry more water off a roof than any other roof plane. The most common flashing is aluminum or galvanized metal in 16 to 24 inch (406 to 610 mm) widths. The lower the roof pitch, the wider the flashing required. On roofs where metal flashing is used, it is installed after a vertical underlayment liner and before the horizontal underlayment and finish roofing. Delete if not required for project.

* + 1. Valley Lined with Metal Flashings: Shall be installed on roofs in applications with metal flashing, after vertical underlayment liner, before horizontal underlayment and finish coating.

\*\* NOTE TO SPECIFIER \*\* Proper attic floor insulation lowers the cost of heating in winter and cooling in summer. Heat loss from the structure during cold winter months can also affect the condition of the wooden frame and roofing materials. The movement of heat carries water vapor as it passes through the attic floor and roof. When water vapor comes into contact with the cold attic floor or roof deck sheathing, it condenses and moisture accumulates in cavities between attic floor joists and roof rafters, in the wood deck sheathing, and in the roofing materials. Unless prevented heat will continue to flow until the temperature between inside and outside is about equal.

* + 1. Insulation: Installed according to manufacturer's instructions.

\*\* NOTE TO SPECIFIER \*\* Proper attic ventilation lowers the cost of cooling and prolongs the life of roofing materials. Without adequate ventilation, summer weather can superheat attic air and raise the temperature of the living areas below through the ceilings, walls, and joists. Superheated air will scorch rafter boards and sheathing, wilt insulation, and cause shingles to buckle. During winter, when windows and doors are kept closed, an attic must have ventilation to release the water vapor produced by bathtubs, showers, and appliances. Delete if not required.

* + 1. Ventilation: Surround SR Underlayment, a Typar Brand shall be installed in applications with ventilated attic spaces as a vapor barrier.
    2. Chimney, Vent and Dormer Flashings
       1. Layers of Surround SR Underlayment, a Typar Brand shall be positioned under the flashing at the top, sides, and bottom.
       2. Install such that Surround SR Underlayment installation creates a secure fit under step flashings.
  1. PROTECTION
     1. Protect installed products until completion of project.

END OF SECTION