SECTION 07 84 43

FIRESTOPPING

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Backer Rod Mfg. Inc.; backer rod materials.  
This section is based on the products of Backer Rod Mfg. Inc., which is located at:  
4244 N. Broadway  
Denver, CO 80216  
Toll Free Tel: 800-595-2950  
Tel: 303-308-0363  
Fax: 303-308-0393  
Email: [request info (bbergel@backerrod.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Backer+Rod+Mfg.+Inc.&coid=50535&rep=&fax=303-308-0393&message=RE:%20Spec%20Question%20(07840bac):%20%20&mf=)  
Web: <http://www.backerrod.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos50/arc50535.html) ] for additional information.  
One of the largest manufacturers of backer rod materials in the world. We are experts in the specialty caulking field, providing backing for elastomeric and other applied sealants to the worldwide construction market. No other company manufactures and supplies backer rod products that are able to withstand temperature variations from -60 degree F to over 2000 degree F.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Backer rod for fire rated construction joints.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 07 84 13 - Penetration Firestopping.
    2. Section 07 91 23 - Backer Rods.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM C 719 - Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic movement.
    2. ASTM C 920 - Specification for Elastomeric Joint Sealants
    3. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials
    4. ASTM E 90 - Test Method for Laboratory Measurement of Air-borne-Sound Transmission Loss of Building Partitions.
    5. ASTM E 119 - Method for Fire Tests of Building Construction and Materials.
    6. ASTM E 136 - Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degreesC.
    7. ASTM E 814 - Methods for Fire Tests of Through-Penetration Fire Steps.
    8. ASTM E 1399 - Test Method of Cyclic Movement and measuring the Minimum and Maximum joint Widths of Architectural Joint System.
    9. NFPA 251 - Fire Test of Building Construction Materials.
    10. NFPA 255 - Burning Character of Building Materials.
    11. UL 263-92 - UL Standard for Safety Fire Tests of Building Construction and Materials.
    12. UL 2079 - UL Standard for Safety Tests for Fire Resistance of Building Joint Systems.
    13. UL 1479 - UL Standard for Safety Fire Test of Through-Penetration Firestops.
    14. UL 723 - UL Standard for Safety Test for Surface Burning Characteristics of Building Materials.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     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 methods.
     3. Shop Drawings: Provide construction detail required to comply with fire rated construction indicated.
     4. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
  2. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
     2. Installer Qualifications: Minimum 2 year experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Rebuild mock-up area as required to produce acceptable work.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Handling: Handle materials to avoid damage.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Backer Rod Mfg. Inc., which is located at: 4244 N. Broadway; Denver, CO 80216; Toll Free Tel: 800-595-2950; Tel: 303-308-0363; Fax: 303-308-0393; Email: [request info (bbergel@backerrod.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Backer+Rod+Mfg.+Inc.&coid=50535&rep=&fax=303-308-0393&message=RE:%20Spec%20Question%20(07840bac):%20%20&mf=); Web: <http://www.backerrod.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 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\*ULTRA BLOCK®, when used together with an approved sealant, provides a 2-Hour, 3-Hour, or 4-Hour fire rated joint system as designated by design configuration, which is capable of withstanding 50% expansion and contraction. Most sealant manufacturers in the United States have tested one or more of their sealants in a UL classified ULTRA BLOCK® system ranging in joint size from 1/2 inch up to 7 inches. We ask that you verify your sealant selection complies with our UL system design on the Backer Rod website. Alphabetical listing follows: Dow Corning, General Electric, Lymtal, Nelson, Pecora, Quaker, Sika, Sonneborn, Specified Technologies Inc., Tremco Vulkem.

* 1. APPLICATIONS/SCOPE
     1. Construction Joint Fire-Stopping Systems
        1. Product: Ultra Block as manufactured by Backer Rod Mfg. Inc.
     2. Fire Stopping Assembly:
        1. Expansion Joint systems shall be a minimum 2-component design. The depth of the backer rod controls the heat sink or temperature rise from the hot face to cold side of the structure. The addition of an elastomeric sealant, nominal 1/2 inch (13 mm) thick, to one or both sides as required contains the smoke, the toxic fumes and the unburned gases.
     3. Assembly:
        1. Configuration: "No. 1" - Backer rod in required length and configuration with sealant at one side.
        2. Configuration: "No.2" - Backer rod in required length and configuration at both openings of joint with sealant at both backer rod locations.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Join Width | Ultra Block Thickness |  | Ultra Block Width 2 Hour |  | Ultra Block Width 3 Hour |  | Ultra Block Width 4 Hour |
|  |  |  | Configuration |  | Configuration |  | Configuration |
|  |  | No. 1 | No. 2 | No. 1 | No. 2 | No. 1 | No. 2 |
| 1/2" | 3/8" | 6" | 2" | 8" | 4" | 12" | 6" |
| 3/4" | 1/2" | 6" | 2" | 8" | 4" | 12" | 6" |
| 1" | 3/4" | 6" | 3-1/2" | 8" | 4" | 12" | 6" |
| 1-1/2" | 1" | 6" | 3-1/2" | 8" | 4" | 12" | 6" |

* + 1. Thickness Requirements:
       1. Joint Width: 1/2 inch (13 mm)/ Use 3/8 inch (9.5 mm) backer rod.
       2. Joint Width: 3/4 inch (19 mm)/ Use 1/2 inch (13 mm) backer rod.
       3. Joint Width: 1 inch (25 mm)/ Use 3/4 inch (19 mm) backer rod.
       4. Joint Width: 1-1/2 inch (38 mm)/ Use 1 inch (25 mm) backer rod.
       5. Joint widths of 2 inches or wider require a multi-layer design engineered by the manufacturer.

\*\* NOTE TO SPECIFIER \*\*ULTRA BLOCK® is a pre-engineered, patented textile fiberglass with fiberglass matt facing, containing approximately 30% by weight unexpanded vermiculite. ULTRA BLOCK® is primarily used in fire rated construction joints.

* 1. MATERIALS
     1. Pre-engineered, patented textile fiberglass with fiberglass matt facing, containing approximately 30% by weight unexpanded vermiculite.
     2. Product contains no asbestos, PCB's, VOC's or lead used or contained in the products.

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 instructions, approved submittals, and in proper relationship with adjacent construction.
   4. PROTECTION
      1. Protect installed products until completion of project.
      2. Repair or replace damaged assembly before concealment or Substantial Completion.

END OF SECTION