SECTION 07 91 23

BACKER RODS FOR SEALANTS

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(07923bac):%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 construction joints.
  1. RELATED SECTIONS

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

* + 1. 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 1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
    2. ASTM C 1016 - Standard Test Method for Determination of Water Absorption of Sealant Backing (Joint Filler) Material.
    3. ASTM C 1253 - Standard Test Method for Determining the Outgassing Potential of Sealant Backing.
    4. ASTM D 1622 - Standard Test Method for Apparent Density of Rigid Cellular Plastics.
    5. ASTM D 1623 - Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
    6. ASTM D 3574 - Standard Test Methods for Flexible Cellular MaterialsSlab, Bonded, and Molded Urethane Foams.
    7. ASTM D 5249 - Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints.
  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. Provide backer rod product data and sealant submittal in a combined submittal for the Architect's review.
  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(07923bac):%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 \*\* Backer Rod offers four distinct products for use in construction joints: Denver Foam®, Titan Foam, Mile High Foam®, and Mile High Foam XL™. The type of backer rod used is governed by the type of sealant used, plus environmental, seismic and temperature requirements. Backer Rod Manufacturing is proud to market our products through authorized distributors and select OEM customers around the world. Delete backer rod product not required.

* 1. BACKER ROD
     1. Backer Rod: Denver Foam as manufactured by Backer Rod Mfg. Inc.
        1. Type: An open cell polyurethane backer rod serving as a backing for elastomeric and other applied caulking sealants.
           1. An open cell backer rod allowing air to reach both sides of sealant for the required complete cure.
        2. Application: For use in expansion/construction joints in concrete and precast concrete walls, floors, partitions, bridge construction, parking decks, curtain walls, glazing, log home construction, highway construction, and pavement maintenance.
           1. Both hot and cold applied sealants can be used with backer rod per ASTM-D-5249-95.
           2. Provide half round backer rod where required for shallow depth joints.
        3. Physical properties:
           1. Density: 1.7 lbs/ft3 ASTM D 1622.
           2. Tensile: 25 lbs/sq inch ASTM D 1623.
           3. Water Absorption: <= 0.107 g/cm3 ASTM C 1016 - Proc. B.
           4. Out Gassing: None Open Cell.
           5. Temperature Service Range: -60 degree F to +500 degree F (-51 degree C to 260 degree C).
           6. U.S. Department of Commerce National Institute of Standards.
           7. Auto Ignition: 700 to 800 degree F (371 degree C to 427 degree C).
           8. Elongation: 90% ASTM D 3574.
           9. Air Flow: 90% ASTM D 3574.
           10. Compression set 5% or less (after 80% compression for 30 days) ASTM D 3574.
     2. Backer Rod: Titan Foam as manufactured by Backer Rod Mfg. Inc.
        1. Type: A soft, grey, non-gassing, pliable backer rod, with an impervious outer skin, used as a backing for elastomeric and other cold applied sealants. An extruded polyethylene bi-cellular foam product which when punctured per ASTM C 1253 does not exhibit any out-gassing. The backer rod shall have an impervious outer skin that resists moisture.
        2. Application: suited for specialty applications such as irregular and varying joint widths where standard closed cell backer rods are not appropriate. Common applications include but are not limited to: concrete expansion and contraction joints, curtain walls, parking decks, bridge and highway construction, pavement maintenance, window glazing and log home chinking.
        3. Physical properties:
           1. Density: 1.8 - 2.5 lb/ft3 ASTM D 1622.
           2. Out-gassing: NONE ASTM C 1253.
           3. Compression Recovery: 95% min ASTM D 5249.
           4. Tensile Strength PSI: 39-50 PSI ASTM D 1623.
           5. Temperature Range: -90 degrees F to 210 degrees F (-68 degree C to 99 degree C) ASTM D 5249.
           6. Water Absorption: less than .03 g/cc ASTM C 1016 - Proc. B.
     3. Backer Rod: Mile High Foam as manufactured by Backer Rod Mfg. Inc.
        1. Type: a closed cell polyethylene backer rod serving as a backing for elastomeric and other applied caulking sealants.
        2. Application: For use in expansion/construction joints in concrete and precast concrete walls, floors, partitions, bridge construction, parking decks, curtain walls, glazing, log home construction, highway construction, and pavement maintenance. Backer rod shall be compatible with cold applied sealants.
        3. Physical Properties:
           1. Backer rod shall be chemically inert, resists oil, gasoline and most solvents. Material is odorless and will not stain.
           2. Density: 1.25-2.0 lbs/ft 3; ASTM D-1622.
           3. Out-gassing: > 1; ASTM C-1253.
           4. Tensile: 39-50 PSI; ASTM C-1623.
           5. Moisture Absorption: 0.002 g/cm 3; ASTM C-1016 - Proc. B.
           6. Temperature Range: -90 degrees F to 210 degrees F (-68 degree C to 99 degree C) ASTM D 5249.
           7. Compression: > 90; ASTM D-5249.
     4. Backer Rod: Mile High Foam XL as manufactured by Backer Rod Mfg. Inc.
        1. Type: A resilient, extruded cross-linked closed cell polyethylene backer rod with a water resistant outer skin used as a backing material for hot and cold applied sealants.
        2. Application: For use in highway joints, parking decks, runways, driveways, parking lots and saw cut expansion joints.
        3. Physical properties:
           1. Density (nominal): 1.3 - 2 lb/ft 3 ASTM D 1622.
           2. Compression Deflection: < 15 ASTM D 5249.
           3. Compression Recovery: > 90 ASTM D 5249.
           4. Tensile Strength PSI: > 20 PSI ASTM D 1623.
           5. Temperature Range: -90 degrees F to 410 degrees F (-68 degree C to 210 degree C) ASTM D 5249.
           6. Water Absorption: 0.03 g/cm 3 ASTM C 1016 - Proc. B.

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