



Polyglass USA Inc.
150 Lyon Dr.
Fernley, NV 89408-8900
Phone: (800) 222-9782
Phone: (775) 575-6007
Fax: (775) 575-2314
E-mail: customerservice@polyglass.com
www.polyglass.com

This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies self-adhering modified bituminous membrane roofing. These products are manufactured by Polyglass USA Inc. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 07 52 19
SELF-ADHERING MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: This Section specifies self-adhering modified bituminous membrane roofing and its installation.
- B. Related Sections:

Specifier Note: Include in this Article only those sections that directly affect the work of this section. Do not include Division 00 or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 and Division 01 sections to some degree.

1. Section [05 31 00 - Steel Decking] [_____].
2. Section [06 10 00 - Rough Carpentry: Plywood Roof Decking] [_____].
3. Section [07 22 16 - Roof Board Insulation] [_____].
4. Section [09 21 16 - Gypsum Board Assemblies: Gypsum Board Sheathing] [_____].

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Section 01 42 19 - Reference Standards may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

- A. ASTM International:
 1. ASTM D41 Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
 2. ASTM D228 Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing.
 3. ASTM D4585 Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.

4. ASTM D6163 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
 5. ASTM D6164 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- B. FM Global (Factory Mutual):
1. FM 4470 Standard for Wind Uplift.
- C. International Code Council (ICC):
1. International Building Code.
- D. Underwriters Laboratories, Inc. (UL).

1.03 ACTION SUBMITTALS

- A. General: Submit listed action submittals in accordance with Conditions of the Contract and Section [01 33 00 - Submittal Procedures] [_____].
- B. Shop Drawings: Indicate information on shop drawings as follows:

Specifier Note: Only include the following paragraph where details of roofing are considered special, such as tapered insulation, flashing and control joints.

1. Indicate [Flashing] [Control joints] [Tapered insulation] [_____] details.

Specifier Note: Use the following paragraph when tapered insulation is specified.

2. Provide layout for tapered insulation.
- C. Samples: Submit as follows:
1. [Duplicate] [_____], [12 inch x 12 inch (305 x 305 mm)] [_____] samples of each membrane used on project.
- D. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.
1. Material Safety Data Sheets (MSDS).
 2. Indicate VOC content for adhesives.

1.04 INFORMATION SUBMITTALS

- A. Quality Assurance:
1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Control Article. Retain or delete as applicable.

- B. Manufacturer's Field Reports: Manufacturer's field reports specified.

1.05 CLOSEOUT SUBMITTALS

- A. Warranty: Submit warranty documents specified.
- B. Operation and Maintenance Data: Submit operation and maintenance data for installed products in accordance with Section [01 78 00 - Closeout Submittals] [_____].
1. Include:
 - a. Manufacturer's instructions covering maintenance requirements.

1.06 QUALITY ASSURANCE

- A. Qualifications:
1. Installer experienced in performing work of this section who has specialized in installation of work similar to that

required for this project.

2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided. Current data on building code requirements and product compliance may be obtained from manufacturer technical support specialists.

B. Regulatory Requirements:

Specifier Note: Self-adhering modified bituminous membrane roofing must also meet the requirements of building codes and zoning bylaws issued by federal, state and local government authorities having jurisdiction. Ensure that project specification section reflects the need to meet these requirements. Edit paragraph below as applicable.

1. [International Building Code (IBC)] [Building Code for the [State] [City] of [_____]].

- C. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with [Section 01 31 19 - Project Meetings] [_____].

1.07 DELIVERY, STORAGE & HANDLING

- A. General: Comply with [01 61 00 - Common Product Requirements] [_____].

- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Delivery:

1. Deliver materials in manufacturer's original packaging with identification labels intact and in sizes to suit project.

D. Storage and Protection:

1. Store membrane and other rolled goods on end on raised platforms protected from exposure to harmful weather conditions and at room temperature conditions whenever possible.
2. Do not double stack pallets.

E. Waste Management and Disposal:

Specifier Note: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for LEED® construction project certification.

1. Separate waste materials for [Reuse] [And] [Recycling] [_____] in accordance with [Section 01 74 19 - Construction Waste Management and Disposal] [_____].

Specifier Note: Manufacturer may take back packaging and delivery materials for recycling.

2. Remove from site and dispose of packaging materials at appropriate recycling facilities.
3. Collect and separate for disposal [Paper] [Plastic] [Polystyrene] [Corrugated cardboard] [_____] packaging material [In appropriate onsite bins] [_____] for recycling.

1.08 PROJECT AMBIENT CONDITIONS

A. Installation Location:

1. Substrate for self-adhering membrane installation: 40 degrees F (4 degrees C) minimum.
2. Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that prevents moisture from being introduced into roofing system.

1.09 SEQUENCING

- A. Sequence With Other Work: Comply with self-adhering modified bituminous membrane roofing system manufacturer's written recommendations for sequencing construction operations.

Specifier Note: Coordinate article below with Conditions of the Contract and with [01 78 36 - Warranties] [_____].

1.010 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate article below with manufacturer's warranty requirements.

- C. Warranty: Commencing on date of acceptance by [Owner] [Architect] [Consultant] [_____].

1.011 MAINTENANCE

- A. Include complete maintenance on self-adhering modified bituminous membrane roofing system for 12 months after date of acceptance by [Owner] [Architect] [Consultant] [_____].
- B. Repair or replace parts of self-adhering modified bituminous membrane roofing system whenever required due to defect and normal wear and tear.
- C. Use only standard parts of product line of manufacturer of self-adhering modified bituminous membrane roofing system.
- D. Maintain locally adequate stock of parts for replacement or emergency purposes.
- E. Provide personnel to perform work under supervision and in direct employ of self-adhering modified bituminous membrane roofing system manufacturer or manufacturer's licensed agent.
- F. Perform work during regular trade working hours satisfactory to [Owner] [Architect] [Consultant] [_____].
- G. Provide emergency call-back at no extra cost and ensure fulfillment of maintenance and emergency service without undue loss of time to [Owner] [Architect] [Consultant] [_____].
- H. Ensure that maintenance personnel register with designated building personnel at time of inspections and maintenance.

1.012 EXTRA MATERIALS

- A. Provide maintenance materials in accordance with Section [01 78 00 - Closeout Submittals] [_____].

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Ensure manufacturer has minimum [5] [_____] years experience in manufacturing components similar to or exceeding requirements of project.

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.02 PROPRIETARY PRODUCTS/SYSTEMS

- A. Manufacturer: Polyglass USA Inc.
 1. Contact: 150 Lyon Dr., Fernley, NV 89408-8900; Telephone: (800) 222-9782, (775) 575-6007; Fax: (775) 575-2314; E-mail: customerservice@polyglass.com; website: www.polyglass.com.

Specifier Note: Choosing a light colored cap sheet membrane may contribute to the process needed when assessing criteria for accumulating points for LEED® certification.

2.03 SHEET MEMBRANES

Specifier Note: Edit the following paragraph if an SBS base sheet is to be applied.

- A. Base Sheet Membrane: To [ASTM D6163] [_____], prefabricated, self-adhered, Styrene-Butadiene-Styrene (SBS) elastomeric polymer mat sheet, [Glass] [_____] reinforcement, 0.49 psf (2.39 kg/m²) [_____] nominal weight.
 1. Finish: [Micro punched polyolefin film with printed lay lines] [Class C - plain surfaced] [_____].
 2. UL Certification: Class [A] [B] [_____].

3. Acceptable Material: Polyglass USA Inc., Elastoflex SA V Base Sheet Membrane.

Specifier Note: Edit the following paragraph if an SBS cap sheet is to be applied.

- B. Cap Sheet Membrane: To [ASTM D 6164] [____], prefabricated, self-adhered, Styrene-Butadiene-Styrene (SBS) elastomeric polymer mat sheet, [Glass] [Polyester] [____] reinforcement, [0.9 psf (4.394 kg/m²)] [0.95 psf (4.638 kg/m²)] [____] nominal weight.

Specifier Note: Cap sheet granules come in a variety of colors. Select colors are specified in the following paragraph. Refer to manufacturer's SPEC-DATA sheet for the full range of granule colors available.

1. Finish: [Granulated, [Black] [Brown] [Red] [Green] [Gray] [____]] [Smooth, [High reflectance]] finish.
2. UL Certification: Class [A] [B] [____].

Specifier Note: Choose Elastoflex SA P for a cap sheet with a smooth finish. Choose Elastoflex SA PG for a cap sheet with a granulated finish.

Specifier Note: Choose the Polykool cap sheet if a smooth, highly reflective surface is required. The Polykool membrane may assist in acquiring LEED® criteria points as well as Energy Star® certification.

3. Acceptable Material: Polyglass USA Inc., [Elastoflex SA P] [Elastoflex SA PG] [Polykool] Cap Sheet Membrane.

Specifier Note: Edit the following paragraph if a rubberized asphalt base sheet is to be applied.

- C. Base Sheet Underlayment: To [ASTM D228] [____], prefabricated, self-adhered, rubberized asphalt mat sheet, [Glass] [Polyester] [____] reinforcement, [0.76 psf (3.712 kg/m²)] [____] nominal weight.
1. Finish: [Polyester fabric on upper surface] [____].
 2. UL Certification: Class [A] [B] [____].
 3. Acceptable Material: Polyglass USA Inc., Polystick TU Plus.

Specifier Note: Edit the following paragraph if a rubberized asphalt sheet is to be applied.

- D. Cap Sheet Underlayment: To [ASTM D228] [____], prefabricated, self-adhered, rubberized asphalt mat sheet, [Glass] [Polyester] [____] reinforcement, [0.714 psf (3.468 kg/m²)] [____] nominal weight.

Specifier Note: Cap sheet granules come in a variety of colors. Select colors are specified in the following paragraph. Refer to manufacturer's SPEC-DATA sheet for the full range of granule colors available.

1. Finish: Granulated, [Black] [Brown] [Red] [Green] [Gray] [____] finish.
2. UL Certification: Class [A] [B] [____].
3. Acceptable Material: Polyglass USA Inc., Polystick TU P, Polystick TU Plus.

2.04 ACCESSORIES

- A. Adhesive: To [ASTM D4585, Type 1] [____], asbestos-free, trowel grade, modified polymer plastic roof cement.
1. Acceptable Material: Polyglass USA Inc., Polyglass 2000 MB+.
- B. Primer: [To ASTM D41] [____] [As recommended by membrane manufacturer].

Specifier Note: The following paragraphs specify different types of roof decking suitable for modified bituminous membrane roofing systems. Choose only the paragraph that meets the project design requirements.

2.05 DECK COVERING

- A. Gypsum Board Sheathing: In accordance with Section [09 21 16 - Gypsum Board Assemblies] [____].

Specifier Note: Sand is used in some ULC and FM designs and is installed in the steel deck flutes to provide a cut-off for gasses.

- B. Sand: Natural silica sand passing 1 - 18 mm sieve.
- C. Plywood: [Treated] [____], [0.5 inch (12.7 mm)] [0.625 inch (15.9 mm)] [____] in accordance with Section [06 10 00 - Rough Carpentry] [____].

Specifier Note: Choose the insulation to suit the project requirements.

2.06 INSULATION

- A. Polystyrene Insulation: [Extruded polystyrene (XPS) insulation] [Expanded polystyrene (EPS) insulation], [____] inches (mm) thick [Thickness as indicated], [Square] [Shiplapped] [Vented] edges in accordance with Section [07 22 16 - Roof Board Insulation] [____].
- B. Fibrous Glass Insulation: [____] inches (mm) thick [Thickness as indicated], [____] x [____] mm maximum size, square edges, unfaced. [Tapered shape to provide [1:50] [1:25] slope with minimum thickness of [____] mm at drains] [____] in accordance with Section [07 22 16 - Roof Board Insulation] [____].
- C. Isocyanurate (Urethane) Insulation: [____] inches (mm) thick [Thickness as indicated], in accordance with Section [07 22 16 - Roof Board Insulation] [____].
- D. Cellular Glass Insulation: [____] inches (mm) thick [Thickness as indicated], [____] x [____] mm maximum size, square edges, unfaced. [Tapered shape to provide [1:50] [1:25] slope with minimum thickness of [____] mm at drains] [____] in accordance with Section [07 22 16 - Roof Board Insulation] [____].

2.07 SOURCE QUALITY CONTROL

- A. Ensure self-adhering modified bituminous membrane roofing system components and materials are from single manufacturer.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Section 01 25 13 - Product Substitution Procedures.

2.08 PRODUCT SUBSTITUTIONS

- A. Substitutions: [In accordance with Section 01 25 13 - Product Substitution Procedures] [____] [No substitutions permitted].

PART 3 EXECUTION

3.01 INSTALLERS

- A. Provide experienced and qualified technicians to carry out installation of self-adhering modified bituminous membrane roofing.

3.02 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and Polyglass USA Inc. SPEC-DATA sheets.

3.03 EXAMINATION

- A. Site Verification of Conditions:
 1. Inspect with [Owner] [Architect] [Consultant] [____] deck conditions including parapets, construction joints, roof drains, plumbing vents and ventilation outlets to determine readiness to proceed.
 2. Verify that substrate conditions, which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of self-adhering modified bituminous membrane roofing.
 3. Inform [Owner] [Architect] [Consultant] [____] of unacceptable conditions immediately upon discovery.
 4. Proceed with installation only after unacceptable conditions have been remedied.

3.04 PREPARATION

- A. Install sound absorbing insulation in flutes of acoustical steel roof deck in accordance with [Deck manufacturer's instructions] [Section 05 31 00 - Steel Decking] [____].

- B. Ensure steel decking is treated with rustproofing or galvanization prior to start of installation of roofing.

Specifier Note: Do not specify sand gas cut-offs in acoustical steel roof deck.

- C. Install sand in flutes of steel [_____] inches (mm) wide at [_____] inches (mm) on center.
- D. Priming: Apply deck primer to [Deck] [Wood] [Metal] [Concrete] [Gypsum board] [Cementitious board] [_____] roofing substrate at the rate [As recommended by manufacturer] [0.66 gal per 100 ft² (2.5 liters per 10 m²)] [_____].

3.05 INSTALLATION

- A. Deck Covering: [Mechanically fasten] [Adhere] to steel deck [Gypsum Board Sheathing] [Glass Mat Gypsum Board] [Cementitious Board] [Plywood] with [Reversible mechanical attachments] [Screws] [_____] to steel deck's upper rib surfaces, spaced [400] [_____] mm on center each way.
 - 1. Place deck covering with long axis of each sheet transverse to steel deck ribs, with end joints staggered and fully supported on ribs.
- B. [Mechanically fasten] [Adhere] insulation in shapes and slopes as indicated in accordance with Section [07 22 16 - Roof Board Insulation] [_____].
- C. Do self-adhering modified bituminous membrane roofing work to [FM] [_____] requirements and [UL] [_____] Design No. [R14571(N)] [_____].

Specifier Note: Coordinate installation with the manufacturer's written installation details and instructions.

- D. Coordinate self-adhering modified bituminous membrane roofing work with work of other trades, for proper time and sequence to avoid construction delays.
- E. Install self-adhering modified bituminous membrane roofing in accordance with manufacturer's written instructions.
- F. Base membrane sheet application:
 - 1. Starting at low point of roof, perpendicular to slope, remove the first [18 - 24 inches (457 - 610 mm)] [_____] of release film.
 - 2. Press membrane into place with firm even pressure.
 - 3. Gradually remove release film from remaining membrane, pressing and rolling evenly, from center to outer edges.
 - 4. Position subsequent sheet by overlapping seams and lining up overlap of top sheet edge with inside of bottom sheet's factory selvage edge.
 - 5. Overlap and cut end laps [6 inches (152 mm)] [_____] minimum.
 - 6. At seam overlaps, remove protective tape and apply even pressure to seam area.
 - 7. Roll edges firmly with [75 lb (34.2 kg)] [_____] minimum roller.
- G. Cap membrane sheet application:
 - 1. Starting at low point of roof, perpendicular to slope, remove the first [18 - 24 inches (457 - 610 mm)] [_____] of release film.
 - 2. Press membrane into place with firm even pressure.
 - 3. Gradually remove release film from remaining membrane, pressing and rolling evenly, from center to outer edges.
 - 4. Position subsequent sheet by overlapping seams and lining up overlap of top sheet edge with inside of bottom sheet's factory selvage edge.
 - 5. Overlap and cut end laps [6 inches (152 mm)] [_____] minimum.
 - 6. At seam overlaps, remove protective tape and apply even pressure to seam area.
 - 7. Roll edges firmly with [75 lb (34.2 kg)] [_____] minimum roller.
- H. Vertical surface application:
 - 1. For vertical surfaces less than [24 inches (610 mm)] [_____] high, follow same application process recommended for self-adhering base and cap sheets.
 - 2. For vertical surfaces greater than [24 inches (610 mm)] [_____] high, use membrane that is not self-adhering.

3. Install using trowel-on modified polymer plastic roofing cement.

3.06 FIELD QUALITY CONTROL

Specifier Note: Use the following Articles when manufacturer's field services are desired to verify the quality of the installed components. Establish the number and duration of periodic site visits required by the Manufacturer and specify below. Consult with the Manufacturer for services required. Delete if field services are not required.

- A. Manufacturer's Field Services: Have manufacturer's technical representative schedule site visits to review work as follows:
 1. After delivery and storage of products.
 2. When preparatory work for which work of this Section depends is complete, but before installation begins.
 3. [Weekly] [2 times] [_____] during progress of work [at [25%] [_____] and [60%] [_____] [_____] of completion.
 4. Upon completion of work, after cleaning is carried out.

3.07 FINAL CLEANING

- A. Do cleanup in accordance with Section [01 74 00 - Cleaning and Waste Management] [_____].
- B. Upon completion, remove surplus and excess materials, rubbish, tools and equipment.

3.08 PROTECTION

- A. Cover walls, walks, [Sloped roofs] [_____] and adjacent work where materials will be hoisted or used.
- B. Use warning signs and barriers.
- C. Protect roof from traffic and damage. Comply with precautions deemed necessary by [Owner] [Architect] [Consultant] [_____].
- D. At end of each day's work or when stoppage occurs due to inclement weather, provide protection for completed work and materials out of storage.

Specifier Note: Coordinate the following Article with Section 01 76 00 - Protecting Installed Construction.

- E. Protect installed product from damage during construction in accordance with Section [01 76 00 - Protecting Installed Construction] [_____].
- F. Make good any damage to adjacent materials caused by self-adhering modified bituminous membrane roofing installation.

END OF SECTION