DIVISION 7

ROOFING AND INSULATION



INSULATION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section.

1.02 DESCRIPTION OF WORK

A. Extent of insulation work is shown on Drawings. Required thickness shall be as indicated on the Drawings and by provisions of this section.

- B. Applications of insulation specified in this section, where applicable, include the following:
 - 1. Rigid insulation below grade and under slab.
 - 2. Board cavity wall insulation.
 - 3. Sound attenuation insulation.

1.03 RELATED WORK UNDER OTHER SECTIONS

1.04 QUALITY ASSURANCE

A. Thermal Resistivity: Where thermal resistivity properties of insulation materials are designated by R-values they represent the rate of heat flow through a homogenous material exactly 1" thick, measured by test method included in reference material standard or for the total installation. They are expressed by the temperature difference in degrees F between the two exposed faces required to cause one BTU to flow through one square foot per hour at mean temperatures indicated.

B. Fire Performance Characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction.

- C. Surface Burning Characteristics: ASTM E 84.
- D. Fire Resistance Ratings: ASTM E 119.
- E. Combustion Characteristics: ASTM E 136.

F. Maximum Allowable Asbestos Content of Inorganic Insulations: Provide insulations composed of mineral fibers or mineral ores which contain less than 0.25% by weight of asbestos of any type or mixture of types occurring naturally as impurities as determined by polarized light microscopy test per Appendix A of 40 CFR 763.

1.05 DELIVERY, STORAGE AND HANDLING

A. General Protection: Protect insulations from physical damage and from becoming wet, soiled, or covered with ice or snow. Comply with manufacturer's recommendations for handling, storage and protection during installation.

- B. Protection for Plastic Insulation
 - 1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
 - 2. Protect against ignition at all times. Do not deliver plastic insulating materials to project ahead of installation time.
 - 3. Complete installation and concealment of plastic materials as rapidly as possible in each area of work.

1.06 SUBMITTALS

A. Submit shop drawings in accordance with Division 1 requirements. Include manufacturer's installation data, limitations and any accessory products required for complete installation.

B. Indicate where each type of insulation is to be used and provide details for respective installations.

PART 2 - PRODUCTS

2.01 INSULATING MATERIALS

A. General: Provide insulating materials which comply with requirements indicated herein for materials, comply with referenced standards, other characteristics.

B. Preformed Units: Sizes to fit applications indicated, selected from manufacturer's standard thickness, widths and lengths.

C. Extruded Polystyrene Board Insulation: Rigid, cellular thermal insulation with closed-cells and integral high density skin, formed by the expansion of polystyrene base resin in an extrusion process to comply with ASTM C 578 for type indicated; with 5-year aged r-values of 5.4 and 5 at 40 and 75 deg. F. (4.4 and 23.9 deg.C), respectively; and as follows:

- 1. Type IV, 1.6 lb./cu. ft. minimum density, unless otherwise indicated.
- 2. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 5 and 165, respectively.
- D. Unfaced Sound Attenuation/Batt Insulation:
 - 1. Fiber Type: Fibers manufactured from glass.
 - 2. Combustion Characteristics: Passes ASTM E 119 test.
 - 3. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 25 and 50, respectively.

15029/7.19.2016

INSULATION

2.02 AUXILIARY INSULATING MATERIALS

A. Adhesive for Bonding Insulation: Type recommended by insulation manufacturer, and complying with requirements for fire performance characteristics.

B. Mechanical Anchors: Type and size indicated or, if not indicated, as recommended by insulation manufacturer for type of application and condition of substrate.

C. Mastic Sealer: Type recommended by insulation manufacturer for bonding edge joints between units and filling voids in work.

PART 3 - EXECUTION

3.01 INSPECTION AND PREPARATION

A. Require installer to examine substrates and conditions under which insulation work is to be performed. A satisfactory substrate is one that complies with requirements of the section in which substrate and related work is specified. Obtain installer's written report listing conditions detrimental to performance of work in this section. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

B. Clean substrates of substances harmful to insulations.

3.02 INSTALLATION, GENERAL

A. Comply with manufacturer's instructions for particular conditions of installation in each case. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with work.

B. Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Remove projections which interfere with placement.

C. Apply a single layer of insulation of required thickness, unless otherwise shown or required to make up total thickness.

3.03 INSTALLATION OF CAVITY-WALL

On units of plastic insulation, install small pads of adhesive spaced approximately 1'-0" O.C. both ways on inside face, as recommended by manufacturer. Fit courses of insulation between wall ties and other confining obstructions in cavity, with edges butted tightly both ways. Press units firmly against masonry or other construction as shown.

3.04 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrate by method indicated, complying with manufacturer's recommendations. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Seal joint between closed-cell (non-breathing) insulation units by applying mastic or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with mastic or sealant.

C. Stuff loose glass fiber insulation into miscellaneous voids and cavity spaces where shown. Compact to approximately 40% of normal maximum volume (to a density of approximately 2.5 lbs. per cu. ft.).

3.05 **PROTECTION**

General: Protect installed insulation and vapor retarders from harmful weather exposures and from possible physical abuses, where possible by nondelayed installation of concealing work or where that is not possible, by temporary covering or enclosure.

- END OF SECTION -

FLASHING AND SHEET METAL

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The extent of each type of flashing and sheet metal work is indicated on the drawings and by provisions of this section.

- B. The types of work specified in this section include the following:
 - 1. Metal counter flashing and base flashing.
 - 2. Miscellaneous sheet metal accessories.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 7 Gutters and Downspouts.
- B. Division 7 Metal Fascia and Copings.

1.03 SUBMITTALS

A. Product data; vents, flashing, and sheet metal, accessories: Submit manufacturer's product specifications, installation instructions and general recommendations for each specified sheet material and fabricated product.

B. Samples; flashing, sheet metal, accessories: samples indicating full range of colors available, upon selection submit to Architect/ Engineer, two 8" square samples of specified sheet materials to be exposed as finished surfaces.

C. Shop Drawings; flashings, sheet metal accessories: Submit shop drawings showing layout, joining, profiles, and anchorages of fabricated work, including major counter flashings, trim/fascia units, layouts at 1/4" scale, details at 3" scales.

1.04 JOB CONDITIONS

Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of the work and protection of materials and finishes.

15029/7.19.2016 METAL

PART 2 - PRODUCTS

2.01 SHEET METAL FLASHING/TRIM

Aluminum: ASTM B 209, alloy 3003, temper H14, AA-C22A44, Class I Kynar 500 finish, of color as selected by Architect from manufacturer's full range of available colors; 0.0332" thick (20 gauge).

2.02 EXTRUDED ALUMINUM

Fascias and expansion joints: Manufacturer's fabrications of sizes and profiles indicated, 6063-T52 0.08" minimum thickness for primary legs of fabrications including miter corner joints 10'-0" sections, Kynar 500. Color to be selected by Architect.

A. These items are referenced to Architectural Products, Covington, Kentucky, and M & M Systems, but equivalent products of Aluminum Co. of America, or others shall be acceptable if approved by the Architect.

B. All miters shall be factory welded and shall be standard or special size as indicated on the roof plans.

C. Full height concealed 4-inch wide cover plates, aluminum compression clamp with 7 equally spaced 9/32 inch holes and NO. $12 \times 1-1/4$ inch, type 305, cadmium plated stainless steel screws and neoprene washers shall be furnished by the manufacturer.

D. Standard and special miters, expansion joints and special sections required on the Drawings shall be fabricated by the manufacturer. All aluminum components shall be brushed anodized finish unless otherwise required or shown.

E. To insure accurate installation and proper functioning, approved shop drawings and field dimensions will be required prior to fabrication.

2.03 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. Fasteners: Same metal as flashing/sheet metal, or other noncorrosive metal as recommended by sheet manufacturer. Match finish of exposed head with material being fastened.

B. Bituminous Coating: FS TT-C-494 or SSPC - Paint 12, solvent type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.

C. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigating sealant.

D. Elastomeric Sealant: Generic type recommended by manufacturer of metal and fabricator of components being sealed; comply with FS TT-S-0027, TT-S-00230, or TT-S-001543.

E. Epoxy Seam Sealer: 2-part noncorrosive metal seam cementing compound, recommended by manufacturer for exterior/interior nonmoving joints including riveted joints.

F. Adhesives: Type recommended by flashing sheet manufacturer for waterproof/weather resistant seaming and adhesive application of flashing sheet.

G. Paper Slip Sheet: 5-lb rosin-sized building paper.

15029/7.19.2016 METAL

H. Polyethylene Underlayment: 6-mil carbonated polyethylene film; FS L-P-512.

I. Metal Accessories: Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.

J. Elastic Flashings Filler: Closed-cell polyethylene or other soft closed-cell material recommended by elastic flashing manufacturer as filler under flashing sheet.

K. Roofing Cement: per roofing manufacturers requirements.

2.04 FABRICATED UNITS

A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance; with expansion provisions for running work, sufficient to permanently prevent leakage, damage or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations. Form exposed sheet metal work without excessive oil-canning, buckling and tool marks, true to line and levels as indicated, with exposed edges folded back to form hems.

B. Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams. For metal other than aluminum, thin edges to be seamed, form seams, and solder. Form aluminum strength where required.

C. Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used, or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1" deep, filled with mastic sealant (concealed with joints).

D. Sealant Joints: Where movable, non-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with industry standards.

E. Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.

F. Aluminum Extrusion Units: Fabricate extruded aluminum running units with formed or extruded aluminum joint covers, for installation behind main members where possible. Fabricate mitered and welded corner units.

PART 3 - EXECUTION

3.01 INSTALLATION REQUIREMENTS

A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations, and with SMACNA "Architectural Sheet Metal Manual". Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set

15029/7.19.2016 METAL

units true to line and level as indicated. Install work with laps, joints and seams which will be permanently watertight and weatherproof.

B. Underlayment: Where aluminum is to be installed directly on cementitious or wood substrates, install a course of paper slip sheet and a course of polyethylene underlayment.

C. Bed flanges of work in a thick coat of bituminous roofing cement where required for waterproof performance.

3.02 CLEANING AND PROTECTION

A. Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes.

B. Protection: Installer shall advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction, to ensure that work will be without damage or deterioration, other than natural weathering, at time of substantial completion.

- END OF SECTION -

15029/7.19.2016 METAL

GUTTERS AND DOWNSPOUTS (PREFINISHED COLOR)

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Prefabricated aluminum gutter and downspouts, with Kynar 500, Class I Finish, with required connecting pieces, joint covers and anchorages conforming with Aluminum Associations Standard AA-C22A44.

- B. Shop fabricated gutters and downspout complete with required connecting pieces and anchorages.
- C. Concrete splash blocks at the ends of all downspouts.

1.02 RELATED WORK

A. Division 7 - Modified Bitumen Membrane Roofing

1.03 REFERENCES

ASTM B209 - Aluminum Alloy Sheet and Plate, temper H14, AA-C22A44.

1.04 SUBMITTALS

A. Submit shop drawings of gutters and downspouts under provisions of Section 01300.

B. Clearly indicate general construction, configurations, jointing methods and locations, fastening methods and locations and installation details.

C. Submit calculations for determining required gutter and downspout sizing for drainage.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Reynolds Metals
- B. Alcoa
- C. Kaiser
- D. SAF
- E. Substitutions: Under provisions of Section 01600.

2.02 MATERIALS

A. Gutters: Fabricate extrusions of sizes and profiles indicated. Gutters shall be .032, aluminum, as detailed on the drawings or required for proper drainage.

B. Downspouts: Minimum 0.03 inch thick sheet aluminum, conforming to requirements of ASTM B244 and ASTM B137; 3" x 4", 4" x 5".

C. Bituminous Paint: FS TT-C-494 or SSPC-Paint 12 for 15-mil dry film thickness.

D. Anchorage Devices and Accessories: Strap recommended by manufacturer and of same metal as downspouts and gutters.

E. Splash Blocks: Furnish precast concrete splash blocks approximately 1'3" x 2'8" \forall for each downspout where indicated.

2.03 FABRICATION

A. Form gutters of profiles and sizes indicated on Drawings and as required to properly collect and remove water. Fabricate complete with welded corners and required connections, flashings and accessories.

B. Form downspouts of lengths required.

C. Form sections square, true and accurate in size, in maximum possible lengths and free of distortions and defects detrimental to appearance or performance. Hem exposed edges. Allow for expansion at joints.

D. Shop fabricate items to greatest extent possible. Comply with details shown and applicable requirements of SMACNA, "Architectural Sheet Metal Manual," and other recognized industry standards.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install gutters and downspouts. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts. Comply with SMACNA, "Architectural Sheet Metal Manual." Provide for thermal expansion.

B. Apply bituminous paint on surfaces to be in contact with dissimilar materials.

C. Slope on gutters as required.

D. Ensure downspouts are properly connected and extend bottom, horizontal leg to within 8" of concrete curb at sidewalk edge.

- E. Touch up finish as required.
- F. Install work with laps, joints and seams which will be permanently watertight and weatherproof.

- END OF SECTION -

CAULKING AND SEALANTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work on this section.

1.02 DESCRIPTION OF WORK

A. All caulking, sealants, etc. as required by the Drawings, and specified herein or necessary to provide weathertight construction. Caulking locations include, but are not limited to, the following:

- 1. Perimeter of all exterior doors an louvers.
- 2. Expansion joints.
- B. Extent of each form and type of joint sealer is indicated on drawings.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Refer to Division 8 sections for glazing requirements; not work of this section.

B. Refer to Division 15 and 16 sections for joint sealers in mechanical and electrical work: not work of this section.

1.04 SYSTEM PERFORMANCES

Provide joints sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Engage an Installer who has successfully completed within the last 3 years at least 5 joint sealer applications similar in type and size to that of this project and who will assign mechanics from these earlier applications to this project, of which one will serve as lead mechanic.

B. Single Source Responsibility for Joint Sealer Materials: Obtain joint sealer materials from a single manufacturer for each difference product required.

15029/7.19.2016 SEALANTS

1.06 GUARANTEE

The Contractor shall guarantee all work under this Section against leakage for a period of three (3) years after final acceptance of work. This guarantee shall also be written against adhesive or cohesive failure, against crazing on surface greater than (3) mils, against staining of adjacent surfaces and against increase or decrease of Shore "A" Durometer hardness greater than 30% of 14-day value of sealant. Any defects occurring during the guarantee period shall be corrected at no additional cost to the Owner.

1.07 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each product required, including instructions for joint preparation and application.

B. Samples for Initial Selection Purposes: Submit manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available, for each product exposed to view.

1.08 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to protect site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials, where applicable.

B. Store and handle materials to prevent their deterioration or damage due to moisture, temperature change, contaminants, or other causes.

1.09 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:

- 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers.
- 2. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40°F (4.4°C).
- 3. When joint substrates are wet due to rain, frost, condensation or other causes.

B. Joint Width Conditions: Do not proceed with installation of joint sealers when joint widths are less than allowed by joint sealer manufacturer for application indicated.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

A. Compound for caulking and sealing above grade at doors and louvers, etc. shall be a one component urethane sealant suitable for use in both horizontal and vertical joints. Sealant shall be "Sonolastic NP 1" by Sonneborn, Mameco Sealant, Vulkem 116, or an approved equal, for elastomeric coating.

15029/7.19.2016 SEALANTS

B. Sealant for concrete and masonry expansion units shall be a one-component, urethane, self-leveling designed for use where indicated.

C. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.

D. Colors: Provide color of exposed joint sealer as selected by Architect from manufacturer's standard colors.

E. Solvents and cleaners used in preparing surfaces for sealing shall be as recommended by the sealant manufacturer.

F. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C-920 requirements, including those for Type, Grade, Class and Uses.

2.02 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers: and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Join Fillers: (Where applicable) preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of material indicated below, and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance. Either flexible, open cell polyurethane foam or non-gassing, closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing bond between sealant and joint filler or other materials at back (3rd) surface of joint. Provide self-adhesive tape where applicable.

2.03 MISCELLANEOUS MATERIALS

A. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer-substrate and field tests.

B. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.

C. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealers and to surfaces adjacent to joint.

15029/7.19.2016 SEALANTS

PART 3 - EXECUTION

3.01 INSPECTION

Require installer to inspect joints indicated to receive joint sealers for compliance with requirements for joint configurations, installation tolerances and other conditions affecting joint sealer performance. Obtain Installer's written report listing any conditions detrimental to performance of joint sealer work. Do not allow joint sealer to proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Pre-Installation Meeting: At Contractor's directions, Installer, joint sealer manufacturers' representatives, and other trades whose work affects installation of joint sealers shall meet at project site to review procedures and time schedule proposed for installation of joint sealers which is coordinated with other, related work.

B. Surface Cleaning of Joints: Clean out joint immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:

- 1. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust: paints, expect for permanent, protective coatings tested and approved for sealant manufacturer; oil; grease; waterproofing; water repellents; water; surface dirt and frost.
- 2. Clean concrete and masonry, by brushing grinding, blast cleaning, mechanical abrading, acid washing or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles removing from above cleaning operations by vacuuming or blowing out joints with oil free compressed air.
- 3. Remove laitance and form release agents from concrete.
- 4. Clean metal and glass by chemical cleaners or other means which are not harmful to substrate or leave residues capable of interfacing with adhesion of joint sealers.

C. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.

D. Masking Tape: Use masking tape where required to prevent contact to sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION OF JOINT SEALERS

A. General: Comply with joint sealer manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

15029/7.19.2016 SEALANTS

- 1. Install Joint-fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint width which allow optimum sealant movement capability.
 - a. Do not leave gaps between ends of joint-fillers.
 - b. Do not stretch, twist, puncture or tear joint fillers.
 - c. Remove absorbent joint-fillers which have become wet prior to sealant application and replace with dry material.
- 2. Install bond breaker tape between sealants and join-fillers, compression seals or back of joints where required to prevent third side adhesion of sealant to back of joint and as recommended by manufacturer.
- 3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.

D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joining widths which allow optimum sealant movement capability.

E. Tooling and Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer. Concave joint configuration per Figure 6A in ASTM C-962, unless otherwise indicated.

3.04 PROTECTION AND CLEANING

A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of substantial completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to produce joint sealer installation with repaired areas indistinguishable form original work.

B. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers joints sealers and of products in which joints occur.

- END OF SECTION -

15029/7.19.2016 SEALANTS