SECTION 07900CPPR – JOINT SEALERS

PART 1 – GENERAL CRITERIA

A. Provide sealant joints at all: 1) Window and door perimeters, 2) curtain wall and storefront perimeters, 3) masonry control joints, 4) precast concrete panel joints, 4) wall cladding panel joints, 5) transverse joints in masonry copings, and 6) all other locations where gaps and movement joints exist on the façade.

B. Do not use sealants for plaza waterproofing or other horizontal waterproofing applications, or for below-grade applications such as pipe or conduit penetrations. Do not use sealants for roofing applications such as attaching roof flashings to masonry walls, or for transverse joints in metal copings. In flashing work, do not use sealants to cover exposed fasteners, or as a substitute for solder in joining metal flashings.

C. The preferred geometry for sealant joints is the butt joint. Where butt joints are not feasible, use fillet joints (triangular cross section) with bond breaker tape at the base of the joint.

D. Provide weeps in horizontal sealant joints where appropriate to drain water that has penetrated the façade. Provide a weep detail on the drawings and indicate spacing of weeps on the elevations or sections where the sealant joint appears.

E. The drawings must identify the locations of sealant joints, and indicate minimum dimensions for each joint, based on the anticipated movement of the joint. Sealant joint width must be 4 times the anticipated movement, but not less than 1/4 inch.

F. Coordination of concealed joints – In situations where concealed sealant joints are required, identify the concealed sealant joint clearly in details, and indicate with a note that the sealant must be installed before the cladding, masonry, or other materials that cover it.

G. Sealant color: Sealants in brick control joints shall match the color of the brick, not the mortar, unless there is a specific architectural intention to the contrary.

PART 2 - PRODUCTS

A. Material Selection: Silicone sealant is generally preferred because of its stable chemistry and UV resistance. In situations where silicone does not adhere adequately, or where staining of polished natural stones or other materials from fluid migration out of the silicone is a concern, a single component polyurethane sealant is preferred.
B. Silicone sealants: Neutral-cure silicone sealant meeting ASTM C920, Type S, Grade NS (Non-sag), Class 25.

1. Medium Modulus (Joint movement capability 50% extension and compression)
   a. DOW Corning 795
   b. Pecora 864
   c. Tremco Spectrem 2

2. Low Modulus (Joint movement capability 100% extension and 50% compression)
   a. DOW Corning 790
   b. Pecora 890
   c. Tremco Spectrem 1

B. Single component low modulus polyurethane sealants: meeting ASTM C920, Type S, Grade NS (Non-sag), Class 25.

1. Sikaflex 15LM by Sika
2. Tremco Dymonic

C. Primers: Always use primers as recommended by the sealant manufacturer for each substrate.

D. Backer Rod: Closed-cell, non-gassing, polyethylene rod. The diameter of the rod must be approximately 25% in excess of joint width.

E. Bond breaker tape: 0.060 inch thick polyethylene, to which sealant does not bond, adhesive backed on one side, width as required.

PART 3 - EXECUTION

A. Remove all dirt and foreign substances, including existing sealant, from surfaces to receive sealant, using either mechanical or solvent techniques as described below:

B. Mechanical cleaning: Sand, grind or wire brush masonry or concrete surfaces until a sound, cohesive surface is achieved. Brush away loose particles. Provide dust control to prevent intrusion of dust from mechanical cleaning to the interior as required.
C. Solvent cleaning: Use fresh clean MEK or other approved solvent on nonporous surfaces with two clean, white, lint-free cotton cloths. Wipe one cloth with solvent and wipe surface vigorously. Use second cloth to clean surface before solvent evaporates. Do not solvent clean at temperatures below 45 °F.

D. Install back-up material into joints. Place the rod so the sealant width is twice the depth, with a minimum depth of 1/4 inch and a maximum depth of 1/2 inch.

E. Apply primers at temperatures above 45 °F. Allow primers to dry. Do not allow primers to become wet before sealant application.

F. Apply sealant to clean, dry, primed surfaces at temperatures above 45 °F. Fill all joints solidly and continuously with sealant. Push the sealant bead ahead of the nozzle; do not “drag” the nozzle.

G. Within 5 minutes of sealant application, dry tool the joint surface with a concave tool to insure intimate contact with the substrate and to eliminate air bubbles. Do not use any liquid for tooling.

H. Keep adjacent surfaces free of sealant. Use masking tape where appropriate.