

SECTION 07920**SEALANTS AND CAULKING****PART 1. GENERAL**

1.01 SCOPE

- A. Work included: furnish all labor, materials, equipment, incidentals, transportation, application/installation and supervision necessary to complete all caulking, sealing and related work called for by the plans and/or specifications, or reasonably inferable from either or both, including, but not limited to the following:
1. At all locations indicated on plans or called for herein.
 2. Perimeters of all items piercing or set into exterior walls.
 3. All other interior and exterior locations (whether or not specifically called for on plans) where required to make work under this Contract complete, fully watertight and attractive in appearance.
 4. Including preparation of joints, priming (where required/directed), backing rods and bond breakers at all joints indicated on plans, as detailed/noted.

1.02 QUALITY ASSURANCE

- A. Sealants and caulking shall contain have no asbestos containing materials.
- B. Qualifications of manufacturers: Products used in the work of this section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Engineer of Record.
- C. Qualification of Installers:
1. Proper caulking and proper installation of sealants require that installers be thoroughly trained and experienced in the necessary skills and thoroughly familiar with the specified requirements.

1.03 USE OF TERMS "CAULKING" AND "SEALANT"

- A. It is the intent of these specifications to differentiate between the terms "caulking" and "sealant."
1. Caulking materials specified are to be used only at interior locations where needed/detailed for appearance to conceal cracks/joints between surfaces, etc.
 2. Sealant materials are to be used at all exterior and interior locations where needed for water tightness and those interior locations where specifically detailed/noted on drawings.

1.04 PRODUCT HANDLING

- A. Delivery and storage: Deliver all materials of this section to the job site in the original unopened containers with all labels intact and legible at time of use. Store only under conditions recommended by the manufacturers. Do not retain on the job site any material which has exceeded the shelf life recommended by its manufacturer.
- B. Protection: Use all means necessary to protect the materials of this section before, during and after installation and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the Engineer or Record.

PART 2. PRODUCTS

2.01 MATERIALS

- A. Caulking compounds, for interior non-moving joints use Externaflux Butyl Caulk, Pecorp-158, Sonneborn-Contech Products, Inc., Butakauk, or approved equal. Sealants: For sealing exterior expansion and control joints: Use Dow Corning Corp. 790 or approved equal.
- B. Colors:
 - 1. Colors for each sealant installation will be selected by the engineer from standard colors normally available from the specified manufacturer.
 - 2. In concealed installations and in partially or, fully exposed installations where so approved by the engineer, standard gray or black sealant may be used.
- C. Primers: Use only those primers which are nonstaining, have been tested for durability on the surfaces to be sealed, and are specifically recommended for this installation by the manufacturer of the sealant used.
- D. Backup Materials: Use only those backup materials which are specifically recommended for this installation by the manufacturer of the sealant used and which are nonabsorbent and nonstaining.
- E. Bond-preventive Materials: Use only those materials best suited for the application and as recommended by the manufacturer of the sealant used.
- F. Use only solvents which can be completely removed or which will not adversely affect the caulking or sealant to be applied.
- G. Other Materials: All other materials, not specifically described but required for complete and proper caulking and installation of sealants, shall be first quality of their respective kinds, new and as selected by the Contractor subject to the approval of the Engineer.

2.02 PROHIBITION ON ASBESTOS CONTAINING MATERIALS

The Department will not accept any materials that contain asbestos. It shall be the Contractor's responsibility to verify that materials furnished to the Department contain no asbestos minerals. Any materials found to have asbestos and installed by the Contractor shall be removed at his expense. Some construction materials that may be currently sold on the market by various manufacturer's contain asbestos materials are drywall/joint compound, plaster, texture coats, vinyl floor tiles, adhesives, roofing tars, felt, shingles, acoustic ceilings, fireproofing, **caulk**, **sealants**, specialty gaskets, fire doors, insulation, particle filters, HVAC ducts, drilling fluid additives, and insulation boards.

The Contractor is hereby alerted to the fact that some of these above listed materials manufactured abroad may contain asbestos containing minerals from the serpentine or amphibole group. The asbestos containing minerals to be avoided are as follows:

Asbestos Type	CAS #	Formula
Chrysotile	12001-29-5	$Mg_3(Si_2O_5)(OH)_4$
Amosite	12172-73-5	$Fe_7Si_8O_{22}(OH)_2$
Crocidolite	12001-28-4	$Na_2Fe^{2+}3Fe^{3+}2Si_8O_{22}(OH)_2$
Tremolite	77536-68-6	$Ca_2Mg_5Si_8O_{22}(OH)_2$
Actinolite	77536-66-4	$Ca_2(Mg,Fe)_5(Si_8O_{22})(OH)_2$
Anthophyllite	77536-67-5	$(Mg, Fe)_7Si_8O_{22}(OH)_2$
Richterite	17068-76-7	$Na(Ca,Na)(Mg, Fe^{++})_5(Si_8O_{22})(OH)_2$
Winchite		$(Ca,Na)Mg_4(Al,Fe^{3+})(Si_8O_{22})(OH)_2$

The Contractor shall check the label of every product submitted. Shop drawing approval shall not absolve the Contractor of the responsibility of submitting asbestos free materials.

PART 3. EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Concrete Surfaces:

1. All surfaces in contact with caulking or sealant shall be dry, sound and well brushed and wiped free from dust.
2. Use solvent to remove oil and grease, wiping the surfaces with clean rags.
3. Where surfaces have been treated, remove the surface treatment by use

- of sandblasting or wire brushing.
- 4. Remove all laitance and mortar from the joint cavity.
- 5. Where backstop is required, insert the approved backup material in the joint cavity to the depth required.

B. Steel Surfaces:

- 1. Steel surfaces in contact with caulking or sealant shall be sandblasted or, if sandblasting would not be practical or would damage adjacent finish, the metal shall be scraped or wire-brushed to remove mill scale.
- 2. Use solvent to remove oil and grease, wiping the surface with clean rags.
- 3. Remove protective coatings on steel by sandblasting or by a solvent that leaves no residue.

C. Aluminum Surfaces:

- 1. Aluminum surfaces in contact with caulking or sealant shall be cleaned of temporary protective coatings, dirt, oil and grease.
- 2. Use only such solvents to remove protective coatings as are recommended for that purpose by the manufacture of the aluminum work and which are nonstaining.

3.03 INSTALLATION OF BACK-UP MATERIAL

- A. Installation of back-up material, primers and bond-breaker, shall be in strict accordance with the respective manufacturer's recommendations.

3.04 JOINT DIMENSIONS

- A. Minimum joint 1/4" wide by 1/2" deep.
- B. Joints more than 1/2" deep shall be solidly filled to within 1/2" of the surface with specified filler.

3.05 APPLICATION: (Coordinate work with other trades.)

- A. Masking: thoroughly and completely mask all joints where the appearance of sealant on adjacent surfaces would be objectionable.
- C. Apply generally with caulking gun of proper nozzle size to fit joint.
- D. Apply with sufficient pressure to fill joint from backing to surface.
- E. For joints in flat surfaces, neatly tool compound slightly concave with proper tools.
- F. Execute finishing of caulking around frames with coving tool.
- G. As work progresses, immediately remove compound that may accidentally flow onto adjoining surfaces using manufacturer's recommended solvent and cleaners. Remove excess material from joints immediately.

- H. Remove masking tape immediately after joints have been tooled.
- I. Clean adjacent surfaces free from caulking or sealant as the installation progresses. Use solvent or cleaning agent as recommended by the caulking or sealant manufacturer.
- J. At completion, carefully check all joints for damage and repair damaged joints.
- K. Remove all debris as a result of this operation.

END OF SECTION