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**Part 1            General**

**1.1                SECTION INCLUDES**

- .1    Preparing substrate surfaces.
- .2    Sealant and joint backing

**1.2                REFERENCES**

- .1    American Society for Testing of Materials (ASTM).
  - .1    ASTM C834-00e1, Standard Specification for Latex Sealants.
  - .2    ASTM C919-02, Standard Practice for use of Sealants in Acoustical Applications.
  - .3    ASTM C920-02, Standard Specification for Elastomeric Joint Sealants.
  - .4    ASTM D2369-04, Standard Test Method for Volatile Content of Coatings.
  - .5    ASTM D5893-96, Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.
- .2    Canadian General Standards Board (CGSB)
  - .1    CANCGSB-19.13-[M87], Sealing Compound, One-Component, Elastomeric, Chemical Curing.

**1.3                SUBMITTALS FOR REVIEW**

- .1    Provide submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Product data: provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and colour availability.
- .3    Samples: submit two sample ribbons of sealant, illustrating sealant colours for selection.
- .4    Submit written confirmation that sealants are compatible with the joint forming materials.
- .5    Submit laboratory tests or data validating product compliance with performance criteria specified. include SWRI validation certificate where required.

**1.4                QUALITY ASSURANCE**

- .1    Installer qualifications: qualified to perform work specified by reason of experience or training provided by product manufacturer. submit reference list including minimum three projects of similar size and scope.

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**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. protect from freezing, moisture, water and contact with ground or floor.
- .2 Store products in a location protected from freezing, damage, construction activity, precipitation, and direct sunlight in strict accordance with manufacturer's recommendations.
- .3 Condition products to approximately 16 to 21°C for use in accordance with manufacturer's recommendations.

**Part 2 Products**

**2.1 SEALANT MATERIALS**

- .1 VOC limit - typical for all sealants: 250 g/l (2.08 lb/gal) when tested in accordance with USEPA method 24 and ASTM D2369.
- .2 Acoustical sealant: to ASTM C919, single component, non-hardening, non-skinning, synthetic rubber.
- .3 Acrylic latex: To ASTM C 834, single component general purpose siliconized acrylic latex sealant.
- .4 Butyl sealant: to ASTM C1311, single component, solvent release, non-skinning, non-sagging, black colour.
- .5 Epoxy, flexible: poured flexible 100% solids epoxy joint filler.
- .6 Polyurethane, self-levelling: to ASTM C 920, type S, grade P, class 25, Single component self-levelling polyurethane sealant with plus or minus 25 percent movement capability for horizontal joints.
- .7 Silicone, one part: to ASTM C 920, type S, grade NS, class 25, single component neutral cure silicone sealant, plus minus 50% joint movement capability.
- .8 Silicone, mildew resistant: to ASTM C 920, single component mildew resistant silicone sealant, +/- 25% movement capability.

**2.2 ACCESSORIES**

- .1 Primer: type recommended by the sealant manufacturer and compatible with joint forming materials.
- .2 Joint cleaner: non-corrosive and non-staining type recommended by sealant manufacturer and compatible with joint forming materials.

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**2.3 COLOURS**

- .1 Unless indicated otherwise in respective technical specification sections, colour selection is at the option of the Departmental Representative.

**2.4 SEALANT SCHEDULE**

- .1 Perimeters of interior door/window frames and surfaces, where required.
  - .1 Sealant type: acrylic latex or silicone, one part; refer to technical specification section.
- .2 Interior partitions and acoustic applications:
  - .1 Sealant type: acoustical sealant.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verify that substrate surfaces and joint openings are clean, dry, and free of frost and ready to receive work.
- .2 Verify that joint backing and release tapes are compatible with sealant.

**3.2 PREPARATION**

- .1 Remove loose materials and foreign matter which might impair adhesion of sealant.
- .2 Clean and prime joints in accordance with sealant manufacturer's written instructions.
- .3 Perform preparation in accordance with sealant manufacturer's written instructions.
- .4 Protect elements surrounding the work of this section from damage or disfiguration.

**3.3 INSTALLATION**

- .1 Install sealant in accordance with sealant manufacturer's written instructions.
- .2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.
- .3 Measure joint dimensions and size materials to achieve required 2:1 width/depth ratios.
- .4 Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- .5 Apply sealant within recommended application temperature ranges. consult manufacturer when sealant cannot be applied within these temperature ranges.
- .6 Tool joints concave.

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**3.4 FIELD QUALITY CONTROL**

- .1 Joint sealants: perform adhesion tests in accordance with manufacturer's written instructions.
- .2 Perform test 21 days after installation at a rate of one test every 300m of installed sealant.
- .3 Remove sealants failing adhesion test, clean substrates, reinstall sealants and perform retesting.
- .4 Maintain test log and submit report to Departmental Representative indicating tests, locations, dates, results, and remedial actions.

**3.5 CLEANING**

- .1 Clean adjacent soiled surfaces.

**3.6 PROTECTION OF FINISHED WORK**

- .1 Remove masking tape and excess sealant.
- .2 Protect sealants until cured.

**END OF SECTION**