

1 **(September 7, 2021)**

2 **Epoxy Crack Sealing**

3 The materials being used may be dermatetic. The Contractor's contact with and use of
4 the materials shall conform to the requirements specified in the SDS for each material,
5 and all personnel shall be provided with appropriate clothing and protective garments.
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7 All materials shall be stored and protected from ignition sources as recommended by
8 the material manufacturer.
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10 The cracks shall be cleaned of efflorescence, deteriorated concrete and other surface
11 debris, by vacuuming, flushing, routing, sawing or other means as required.
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13 Entry ports shall consist of tubes, tees or other valve devices as recommended by the
14 resin manufacturer. The ports shall be placed at intervals along each crack in
15 accordance with the manufacturer's written instructions for the resin being used. The
16 holes for the entry ports shall be drilled with a hollow bit with an attached vacuum chuck
17 to prevent concrete dust from becoming embedded in the crack.
18

19 The exposed crack surfaces and the areas around the entry ports shall be sealed with
20 epoxy sealing paste and cured in accordance with the resin manufacturer's written
21 instructions, to attain a seal capable of withstanding the applied injection pressures.
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23 The Contractor shall furnish the services of a factory trained technical representative to
24 perform the epoxy crack sealing injection.
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26 Injection shall be accomplished with a pressure or injection machine compatible with the
27 resin selected for use and shall begin at the lowest port and continue until there is
28 evidence of the resin at the entry port directly above and adjacent to the port being
29 pumped. When material travel is indicated, the nozzle shall be moved to the port that
30 shows resin. The previously pumped port shall be sealed. Injection shall continue until
31 the crack is completely filled. On wide cracks where resin travel between ports will be
32 rapid, two or more ports may be pumped simultaneously. On exceptionally large cracks,
33 a formulation (dependent upon crack width, ambient temperature, modulus
34 requirements and other variables) of epoxy resin and fine sands shall be used as
35 recommended by the resin manufacturer.
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37 After all ports have been pumped and the crack is full, the epoxy resin shall be cured
38 without disturbance in accordance with the resin manufacturer's written instructions as
39 necessary to ensure development of the full bond capacity of the material.
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41 After the epoxy has cured completely, the epoxy sealing paste and port stems shall be
42 ground flush with the original surface of the concrete.
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44 At the discretion of the Engineer, cores shall be taken after the repair is completed to
45 confirm penetration and bonding. The number and locations of such cores will be as
46 specified by the Engineer. These cores shall be submitted to the Engineer for testing in
47 the State Materials Laboratory. The Contractor shall submit a Working Drawing for
48 repair of core holes in accordance with Section 6-01.16.