

Anchors' Architectural Specifications

Application Note AN37 18MAR2016

POST-INSTALLED ASPHALT ANCHORS

GENERAL

- 1. This specification applies to the use of postinstalled anchors in asphalt.
- It is to be understood that asphalt, unlike concrete, is not an engineered surface and that it will yield under forces applied for lengthy duration
- This specification is limited to drill-in chemical anchors
- 4. The specification covers a number of asphalt anchors with different threads and sizes. The size-dependent features are listed in sequence in red. When inserting the text from this document remove the features that do not apply to the size of interest.
- 5. The sequence is SP10, SP12, SP18

LIMITATIONS

- 1. The use of the anchors shall not involve life-safety applications.
- The application shall not involve structures that do not support themselves in wind-free environment.
- The application shall not involve applying a constant force on the anchor exceeding 25% of its ratings. Short duration forces such as wind, collisions or other sources of momentary forces are allowed as long as they are within the allowed forces and torques.
- 4. Asphalt varies in thickness, density and in its resistance to external forces under varying temperatures. The specifications provided in AAG documents applies only under the test conditions specified; it is recommended to derate the applied forces for increased margin of safety.

DRILL-IN ASPHALT ANCHORS

1. The use of carbon steel is not recommended for applications with salt water exposure, or





where rust over time may be objectionable. Use an all-stainless steel version instead.

- 2. The anchors shall be manufactured of carbon steel and be zinc plated.
- 3. SP10: The anchor body shall be 5/8" in diameter, 6" long.

SP12: The anchor body shall be 5/8" in diameter, 12" long

SP18: The anchor body shall be 7/8" in diameter, 12" long

4. SP10: The anchor shall be provided with an internal thread of 3/8"-16 UNC

SP12: The anchor shall be provided with an internal thread of 3/8"-16 UNC

SP18: The anchor shall be provided with an internal thread of 7/16"-14 UNC

- 5. The anchor shall accept bolts up to 2.25" threaded into the anchor. There shall be no limit on the length of a bolt exposed above the head of the anchor.
- 6. The anchor shall include a large head to prevent the anchor from falling into the drilled hole in the asphalt and to cover oversize holes. The head shall also prevent static pull on the anchor as the bolt is tightened. The head shall be no less than 1.3" in diameter.
- 7. The anchor shall be used in conjunction with grout specified by the manufacturer.

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- 8. The anchor body shall be provided with an uneven surface with multiple roughness features of at least 0.080" to secure a good bond with the grout.
- 9. The anchor shall be supplied with a 1" bolt grade 5 or higher and a 1" washer, preinstalled at the factory.

INSTALLATION REQUIREMENTS

 SP10: The installation shall require drilling an oversize hole of at least 7/8" diameter in the asphalt, to the depth of 6".

SP12: The installation shall require drilling an oversize hole of at least 7/8" diameter in the asphalt, to the depth of 12".

SP18: The installation shall require drilling an oversize hole of at least 1" diameter in the asphalt, to the depth of 12".

- 2. The installation shall require filling the hole with the specified and mixed grout.
- The installation shall not require or allow the use of impact wrenches to drop the anchor into the hole.
- 4. The anchors shall be pushed or gently hammered to drop into the hole until the head is stopped by the asphalt
- The bolt and washer that were preinstalled on the anchor shall be removed not earlier than the initial curing time specified by the manufacturer of the grout, typically about 15 minutes.
- When installing the appliance to the anchor, the torque applied to the bolt shall not exceed the specifications in the anchor's data sheet.

