



Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements¹

This standard is issued under the fixed designation D 6690; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers joint and crack sealants of the hot applied type intended for use in sealing joints and cracks in Portland Cement Concrete and Asphaltic Concrete Pavements.

1.2 The values stated in SI units are the standard.

1.3 This standard does not purport to cover the properties required of sealants for use in areas of Portland Cement concrete or asphaltic pavement subject to jet fuel or other fuel spillage such as vehicle and/or aircraft refuel and maintenance areas.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 1190 Specification for Concrete Joint Sealer, Hot-Applied Elastic Type²

D 3405 Specification for Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements²

D 5167 Practice for Melting of Hot-Applied Joint and Crack sealant and Filler for Evaluation²

D 5249 Specification for Backer Material for use with Cold and Hot-Applied Joint Sealants in Portland Cement Concrete and Asphalt Joints²

D 5329 Test Methods for Sealants and Fillers, Hot-Applied for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements²

2.2 Federal Specification:³

SS-S-1410C

3. General Requirements

3.1 The sealant shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of

effectively sealing joints and cracks in concrete and asphaltic pavements against the infiltration of moisture and foreign material throughout repeated cycles of expansion and contraction with temperature changes, and that will not, at ambient temperatures, flow from the joint or be picked up by vehicle tires. The material shall be capable of being brought to a uniform pouring consistency suitable for completely filling the joints without inclusion of large air holes or discontinuities and without damage to the material. It shall remain relatively unchanged in application characteristics for at least 6 h at the recommended application temperature in the field.

4. Classification

4.1 *Type I*—A joint and crack sealant capable of maintaining an effective seal in moderate climates. The material is tested for low temperature performance at -18°C using 50 % extension (formerly Specification D 1190).

4.2 *Type II*—A joint and crack sealant capable of maintaining an effective seal in most climates. Material is tested for low temperature performance at -29°C using 50 % extension (formerly Specification D 3405).

4.3 *Type III*—A joint and crack sealant capable of maintaining an effective seal in most climates. Material is tested for low temperature performance at -29°C using 50 % extension. Special tests are included (formerly Federal Spec SS-S-1401C).

4.4 *Type IV*—A joint and crack sealant capable of maintaining an effective seal in climates experiencing very cold temperatures. Material is tested for low temperature performance at -29°C using 200 % extension.

NOTE 1—It is the responsibility of the user agency to determine which type is most applicable to their conditions.

5. Physical Requirements

5.1 *Maximum Heating Temperature*—The maximum heating temperature is the highest temperature to which a sealant can be heated, and still conform to all the requirements specified herein. For purposes of testing as specified hereinafter, the application temperature shall be the same as the maximum heating temperature. The maximum heating temperature shall be set forth by the manufacturer, shall be shown

¹ This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.33 on Formed In-Place Sealants for Joints and Cracks in Pavements.

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² *Annual Book of ASTM Standards*, Vol 04.03.

³ Available from U.S. Government Printing Office, Washington, DC 20402.