

3723 HOT-POURED, ELASTIC TYPE JOINT AND CRACK SEALER

3723.1 SCOPE

Provide hot-poured elastic type joint and crack sealer to seal joints and cracks in concrete and bituminous pavements, bridges, and other structures.

3723.2 REQUIREMENTS

Provide a sealant material meeting the following requirements:

- (1) Listed on the Approved/Qualified Products List;
- (2) Composed of a combination of polymeric materials, fully reacted chemically to form a homogeneous compound;
- (3) When melted, ensure the sealant does not separate or settle and ensure the sealant does not contain a dispersed or settling component, and
- (4) Maintains a uniform consistency to seal joints and cracks without large air holes or discontinuities.

A Physical Requirements

Provide sealant meeting the requirements of ASTM D 6690, Type II and the following modifications:

Test	Requirement
Cone penetration at 77 °F [25 °C], 150 g, 5 s	60 – 90 dmm
Bond at –20 °F [–29 °C], 3 cycles, 100% extension	No adhesion or cohesion bond failure after 3 cycles
Mandrel bend test at –29 °F [–34 °C], 1 in [25 mm] mandrel	No cracking
Resilience at 77 °F [25 °C]	≥ 40%

B Packaging and Marking

Package and ship the sealant material in boxes no greater than 50 lb [23 kg]. Mark the containers with the following information:

- (1) Material name,
- (2) Manufacturer name,
- (3) Brand name,
- (4) Weight,
- (5) Batch number, and
- (6) Maximum heating temperature, as recommended by the manufacturer.

3723.3 SAMPLING AND TESTING

A Sampling

Provide samples in rates and sizes meeting the requirements of the Schedule of Materials Control, or as required by the contract.

The Materials Engineer will perform tests on samples taken from the product proposed for use. Submit to the Engineer a manufacturer's Certificate of Compliance with each sealant batch.

B Methods of Test

B.1 Bond Test

Perform tests meeting the requirements of ASTM D 5329, except perform the bond test using sawed cement mortar blocks or asphalt HMA blocks (consistent with the pavement type) prepared using the methods found in the Laboratory Manual.

B.2 Mandrel Bend Test ASTM D 522, Method B

The Materials Engineer will perform the Mandrel Bend Test at $-29\text{ }^{\circ}\text{F}$ [$-34\text{ }^{\circ}\text{C}$] using a 1 in [25 mm] mandrel, bending the specimen 180° over 5 s. The Materials Engineer will prepare test specimens meeting the requirements of ASTM D 6690, Type II, Flow Test, and condition the specimens at $-29\text{ }^{\circ}\text{F}$ [$-34\text{ }^{\circ}\text{C}$] for at least 4 h.