

1507 - PRESSURE RELIEF JOINT FILLER

SECTION 1507

PRESSURE RELIEF JOINT FILLER

1507.1 DESCRIPTION

This specification covers materials for pressure relief joint filler and lubricant adhesive for use when installing the joint filler material.

1507.2 REQUIREMENTS

a. Polyurethane Pressure Relief Joint Filler (4 inch Joint Opening).

(1) General: This material is a flexible, low density, cellular polyurethane plank for use in pressure relief joints for concrete pavements. It is multicellular, homogeneous foam, having a specially designed cross section, which locks the filler in place.

(2) Physical Properties. Provide joint filler material that complies with TABLE 1507-1:

| TABLE 1507-1: POLYURETHANE PRESSURE RELIEF JOINT FILLER (4 inch Joint Opening) | |
|---|-----------------------|
| Property | Requirements |
| Compression (PSI): | |
| At 25% Deflection | 5 ± 2 |
| At 65% Deflection | 12 ± 4 |
| Water Absorption (% by Volume): | Less than 30 |
| Density (lbs/cu ft): | 7 - 10 |
| Recovery (Percent, Min.): | 90 |
| Dimensions: | |
| Width | 4 inches Nominal |
| Depth | 7 3/4 inches Nominal* |

*Include a supply (equal to the length of the order) of 1 inch X 4 inches polystyrene or polyurethane foam as spacers to insert in the bottom of the trench.

b. Polyethylene Pressure Relief Joint Filler (2 inch or 4 inch Joint Opening).

(1) General: This material is a flexible, low density, multicellular, closed cell, polyethylene plank for use as a highway pressure relief joint. Provide 2 inch or 4 inch width as specified in the Contract Documents.

(2) Physical Properties. The joint filler material complies with TABLE 1507-2.

| TABLE 1507-2: POLYURETHANE PRESSURE RELIEF JOINT FILLER (2 or 4 inch Joint Opening) | |
|--|------------------------------|
| Property | Requirements |
| Compression (PSI): | |
| At 10% Deflection | Less than 10 |
| At 80% Deflection | Less than 125 |
| Water Absorption (% by Volume): | Less than 0.5 |
| Density (lbs/cu ft): | 2.6 ± 0.2 |
| Dimensions: | |
| Width | 2 inches or 4 inches Nominal |
| Depth | 9 inches Nominal |

c. Lubricant Adhesive. Provide a lubricant adhesive recommended by the manufacturer of the joint filler for use when installing the joint filler material. It must have workable consistency at the temperatures the filler material will be installed, be compatible with the joint filler material and the concrete, and be relatively unaffected by the moisture in concrete.

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1507.3 TEST METHODS

a. Polyurethane Pressure Relief Joint Filler.

- (1) Compression - Deflection - In accordance with ASTM D 3574 (Test C) using a rate of compression of 2 inches/minute and a sample preflexed 75%.
- (2) Water Absorption - In accordance with AASHTO T-42.
- (3) Recovery. 65% deflection recovery calculated after 1-minute relaxation from deflection return.

b. Polyethylene Pressure Relief Joint Filler.

- (1) Compression: In accordance with ASTM D 1056 except determine the compressive strength at 10% deflection and 80% deflection.
- (2) Water Absorption: In accordance with ASTM C 272 using conditioning procedure 10.1.1 at a temperature of $120 \pm 5^{\circ}\text{F}$.
- (3) Density: In accordance with ASTM D 3574 (Test A).

1507.4 PREQUALIFICATION

None required.

1507.5 BASIS OF ACCEPTANCE

- a. Receipt and approval of a Type D certification as specified in **DIVISION 2600**.
- b. Visual inspection at destination for condition and dimensional requirements.