

## SECTION 07922

# RELIEF JOINT CRACK SEALING

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Clean and seal designated relief joints.

#### 1.2 RELATED SECTIONS

- A. Section 03152: Concrete Joint Control

#### 1.3 REFERENCES

- A. ASTM D 3405: Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements
- B. ASTM D 3406: Joint Sealant, Hot-Applied, Elastomeric-Type, for Portland Cement Concrete Pavements

#### 1.4 DEFINITIONS **Not Used**

#### 1.5 SUBMITTALS **Not Used**

#### 1.6 CERTIFICATION

- A. Submit the manufacturer's certification of compliance for all shipments.

#### 1.7 DELIVERY

- A. Deliver packaged material in unopened packages with labels clearly indicating the following:
  1. Name of manufacturer
  2. Manufacturer's product name or product number
  3. Manufacturer's batch or lot number
  4. The application temperature range
  5. The recommended application temperature and the safe heating temperature range

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Backer Rod: Refer to Section 03152.
- B. Crack Sealing Compound: Sealant with the following characteristics:

Table 1

<b>Crack Sealing Compound</b>		
<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
Tensile Strength Adhesion, 4 h Cure	ASTM D 3406	Section 4.7
Ductility		min. 12 inches at 0 .4 inch/min. at 40 degrees F
Force-Ductility		4 lbs max.
Flow	ASTM D 3405	Section 4.3
Asphalt Compatibility		at 140 degrees F
Workability		¼ inch penetration
Curing		45 minutes
Flexibility, ⅛ inch x 1 inch x 6 inches		no cracks

### 2.2 EQUIPMENT

- A. Sealant placement equipment:
  - 1. Capable of circulating hot oil for heat transfer to heat the product (sealant machines).
  - 2. Do not use direct heat transfer units (tar pots).
  - 3. Do not exceed the 525 gallon maximum product tank capacity of the sealant placement equipment.
- B. Temperature control
  - 1. Sealant unit required to have an approved ASTM Thermometer Number 50 degrees F, or a temperature measurement device capable of reading within  $\pm 4$  degrees F from 194 degrees F to 700 degrees F.
  - 2. Observe the sealant manufacturer's instruction on application temperature.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Sampling:
  - 1. Stockpile all sealant to be used on the project at least 20 working days prior to use. Keep the stockpile dry.
  - 2. Notify the Engineer when stockpile is established and ready to be sampled.
  - 3. Take at least one random sample of each batch or lot number (minimum of 11 lb/sample).
  - 4. Do not place any material until the batch or lot material has been approved.
  - 5. No claim or extension of contract applies when the material fails to meet specification.

### **3.2 APPLICATION**

- A. Apply designated joints as shown on the plans.
- B. Clean 6 inches on both sides of the joint of foreign matter and loosened particles with a hot compressed air (HCA) heat lance immediately before sealing the joints. Adequate cleaning is determined by surface darkening at least 6 inches wide, centered on the joint.
- C. Fill the joints following the Relief Joint Crack Sealing detail on the plans.
- D. Use an appropriate backer rod in the joint opening where the depth and width of the joint opening are greater than 2 inches and 1/2 inch respectively.
- E. Replace the sealant material picked up or pulled out at the Contractor's expense. The Contractor will remain liable for any damage to the traveling public resulting from sealant application or sealant pull-out.

END OF SECTION