



**CJF-1**  
**SPECIFICATIONS FOR THE APPLICATION OF CRACK SEALING**

**GENERAL**

This work shall consist of placing a sealing material in random cracks in the asphalt surface as specified in these Special Provisions and as directed by the Engineer.

Sealant compound shall not be placed unless the joint is dry, clean and free of dust. All cracks which have an average clear opening width of  $\frac{1}{4}$  inch to  $\frac{3}{4}$  inch shall be cleaned and sealed with a minimum sealant depth of  $\frac{1}{2}$  inch.

All cracks, which have an average clear opening of  $\frac{1}{4}$  inch or less, shall not be sealed.

All cracks which have an average clear opening of  $\frac{3}{4}$  inch or greater shall be cleaned to the full depth of the crack using compressed air or as directed by the Engineer and filled with hot asphalt concrete conforming to MAG section 710 except that the largest aggregate size in the asphalt concrete will be no greater than  $\frac{3}{8}$  inch or as directed by the Engineer. The asphalt concrete will then be compacted using a tandem wheel (steel wheel) roller. In areas too small for the roller to access, manual compaction with a vibratory plate compactor will be allowed. The compacted fill shall be brought flush to the adjacent pavement surface. These cracks will not be sealed.

**WEATHER**

The face of the crack shall be surface dry and the ambient and pavement temperatures shall both be at least 35°F at the time of application of the sealant or at manufacturer's recommendations, whichever is higher.

**CLEANING**

The cracks to be sealed will be thoroughly cleaned using compressed air.

**EQUIPMENT**

Equipment, tools and machines used in the performance of the work shall be maintained in satisfactory working condition at all times, and shall be subject to the approval of the Engineer. All equipment proposed to be used under this section shall be of sufficient size and in such mechanical condition to be capable of completing the work and producing a quality job.

Air compressors for cleaning the cracks shall be capable of producing an air volume of at least 150 cubic feet per minute.

A double boiler melter using heat transfer oil as the heat transfer medium, with a positive displacement, hydraulically driven, gear type pump shall be used to melt and apply the cracksealing material. The melter shall be fully agitated and shall be capable of heating the material to the required application temperature and maintaining that temperature. The melter shall be equipped with thermometers to monitor both the temperature of the material and that of the heat transfer oil.

On smaller projects and at the direction of the Engineer, a double boiler melter with a gravity feed may be used to melt the material with the material being placed with "Bander Applicators".

### **APPLICATION**

Installation of the sealant shall be such that the in-place sealant shall be well bonded to the existing asphaltic concrete and free of voids or entrapped air.

The cracks shall be sealed in a neat and workmanlike manner so that upon completion of the work the surface of the sealant material will be approximately 1/8 to 1/4 inch below the adjacent pavement surface. The Contractor shall refill all low cracks before final acceptance.

A manual "V" type squeegee will be used to force the cracksealing material into the crack. The sealant is intended to be placed entirely within the crack. All care will be taken to keep the surface band of material to a minimum.

### **TRAFFIC**

Vehicular or heavy equipment traffic shall not be permitted on the pavement in the area of the treated cracks until the cracksealing material is thoroughly cured and set.

### **MATERIAL**

The material shall be formulated from polymer-modified asphalt, virgin synthetic rubber and reclaimed rubber compounds.

The cracksealing material shall come pre-reacted in pre-packaged, 30-pound poly wrapped blocks.

Cracksealing material shall conform to the following:

<b>Test</b>	<b>Specification</b>
Softening Point (ASTM D36)	222°F min.
Cone Penetration (ASTM D5329)	40 max.
Resilience (ASTM D5329)	30% min.
Flow @ 140°F (ASTM D5329)	0
Ductility, 77°F (ASTM D113)	30 cm min.
Flexibility (Utah Procedure)	Pass at 30°F
Asphalt Compatibility (ASTM D3407)	Complete
Tensile Adhesion (ASTM D3583)	400% min.
Safe Heating Temperature	410°F
Recommended Pour Temperature	390°F

### **PAYMENT**

The payment for sealing cracks shall be per pound of cracksealing material in place. The price shall include full compensation for cleaning all cracks and all labor and materials necessary for all work.