

**ITEM 04502.41 M - SAW CUT, CLEAN, AND FILL TRANSVERSE AND LONGITUDINAL CONTRACTION JOINTS IN PCC PAVEMENT**

**DESCRIPTION:** Saw cut, clean, and fill transverse and longitudinal contraction joints.

**MATERIALS**

Highway Joint Sealant (ASTM 3405) . . . . . Approved List

The Department may perform supplementary sampling and testing. Deliver sealant in the manufacturer's original sealed container legibly marked with the:

- Manufacturer's name,
- Trade name of the sealant,
- Manufacturer's lot or batch number,
- Pouring temperature, and
- Safe heating temperance.

**CONSTRUCTION DETAILS**

Fill joints when the air and pavement temperatures are above 10°C. Do not fill when the joint surfaces are wet.

Position transverse joint supports and longitudinal joint ties in accordance with the contract documents. Perform first stage saw cuts in accordance with the contract documents. Joint filling may be delayed for convenience. Joint chipping resulting from debris accumulation in an unfilled joint, as determined by the Engineer, will be treated in accordance with 502-3.15, Defective or Damaged Concrete.

Completely sweep debris from the pavement surface before profilographing or opening to construction traffic. Continuously sweep the pavement if it is opened to construction traffic while the joints are unfilled.

Pressure wash the saw cuts before filling using a minimum pressure of 6.0 MPA. Use a maximum pressure such that no damage occurs to the concrete from washing. Wash such that all debris is removed from the joint. Manually dislodge debris remaining in the joint after pressure washing and re-wash the joint. Within 24 hours of pressure washing, air blast the saw cut such that all debris is removed from the cut and the exposed faces are dry. Neatly and completely fill the saw cut with Highway Joint Sealant from the bottom of the cut to within 5 -7 mm of the pavement surface.

Provide the Engineer a copy of the sealant manufacturer's recommendations pertaining to the heating and application at least 24 hours before filling. Follow these recommendations unless modified by this specification.

Heat the sealant in a melter constructed either

- as a double boiler, with the space between inner and outer shells filled with oil or other heat-transfer medium, or
- with internal tubes or coils carrying the sealant through a heated oil bath and into a heated

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double wall hopper.

Do not use direct heating. Use a unit with positive temperature control, mechanical agitation, recirculation pumps, and separate thermometers to indicate the temperature of the heat transfer medium and the joint sealant material in the hopper. The Engineer will inspect the unit before filling. Do not fill any joint if the thermometers are defective or missing. Provide the Engineer with two (457 mm stem) thermometers, having a temperature range sufficient to meet the requirements of this specification. Thermometers will remain the Contractor's property. Use a discharge hose equipped with a controlled heating apparatus or sufficiently insulated to maintain the proper sealant temperature.

The recommended pouring temperature is 5°C below the manufacturer's designated safe heating temperature, with an allowable variation of  $\pm 5^{\circ}\text{C}$ . Do not use sealant that has exceeded the safe heating temperature, has been heated at the pouring temperature in excess of 6 hours, or has been reheated.

Open to traffic after the sealant has cured to prevent tracking.

**METHOD OF MEASUREMENT:** Lump sum.

**BASIS OF PAYMENT:** In the bid price include the cost of all labor, materials, and equipment necessary to saw cut joints, pressure wash the joints, air blast the joints, and fill the joints.