

ITEM 04502.8018 M - SEALING JOINTS IN PORTLAND CEMENT CONCRETE PAVEMENT

DESCRIPTION: Saw, clean, and fill joints in existing portland cement concrete pavement.

MATERIAL REQUIREMENTS

Highway Joint Sealant (ASTM D3405)	Approved List
Backer Rod For Hot Pour Joint Sealants	Approved List
Bond Breaking Tape	Commercially Available

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.

Use a backer rod having a diameter 25% wider than the joint width. A backer rod will not be required if the joint width is less than 13 mm.

Use polyethylene adhesive tape or masking tape as a bond breaker. Use tape having a width equal to the joint width (+ 0 mm, - 3 mm).

CONSTRUCTION DETAILS

General: Protect traffic and property during all operations.

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

Joint Preparation and Cleaning: Pressure wash joints 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. Dislodge debris remaining in the joint after pressure washing, and re-wash the joint. If sawing is the method chosen for debris removal, use diamond blade saws and remove no more than 2 mm of concrete from each of the existing joint faces. Within 24 hours of pressure washing, air blast the joint such that all debris is removed from the joint and the exposed faces are dry. Do not allow any traffic on the pavement in the time frame between pressure washing and filling. Neatly and completely fill the joint with highway joint sealant from the bottom of the reservoir (or top of the backer rod) 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

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- 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 double wall hopper.

Do not use direct heating. Use a unit with positive temperature control, mechanical agitation, re-circulation 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 ± 5°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

Meters of joints filled.

BASIS OF PAYMENT

Include the cost of all labor, equipment, and materials necessary to saw, clean, and fill joints.

This specification is
DisApproved