

**CONSTRUCTION SPECIFICATION FOR
TACK COAT**

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TS 3.20.01 SCOPE

The work under this specification shall comprise the supply of labour, material and equipment for the hauling and spreading of tack coat as require under this contract, or as directed by the City.

TS 3.20.02 REFERENCES

This specification refers to the following specifications and publications:

Ontario Provincial Standard Specifications, Material

OPSS 1103 - Emulsified Asphalt

TS 3.20.03 DEFINITIONS – Not Used

TS 3.20.04 SUBMISSION AND DESIGN REQUIREMENTS – Not Used

TS 3.20.05 MATERIALS

Tack coating shall be an asphaltic emulsion SS-1H meeting the requirements of OPSS 1103.

TS 3.20.06 EQUIPMENT

The emulsion shall be applied evenly, by means of a pressure distributor which consists of a fully insulated tank permanently and rigidly mounted on a truck or trailer provided with pneumatic tires and propelled by a power unit capable of maintaining a constant and uniform speed.

The distributor shall be provided with the following minimum equipment requirements:

- (a) Hand Hose: Proper hand hose attachments to uniformly apply the tack coat to any areas unavoidably missed by the distributor.
- (b) Tachometer: An approved tachometer to enable the operator to maintain the necessary speed required to ensure the specified rate of application.
- (c) Power Unit: An independent, mechanically governed power unit for developing uniform pressures of from 140 to 345 kPa within the distributor tank or in the spray manifold. This unit shall include an accurate pressure gauge and a calibrated pressure pump equipped with a gauge registering litres/min. This system shall be capable of applying accurately measured quantities of bituminous materials at specified rates and pressures through the spray bars and nozzles.
- (d) Meter: The Contractor shall supply means acceptable to the City to measure the volume of tack coat placed in the work.

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- (e) **Spray Bar:** Rear mounted spray bars and nozzles, set parallel to the surface to be sprayed and capable of vertical and lateral adjustment. The spray bars shall be capable of adjustment to provide a minimum spraying width of 2.5 metres and a maximum spraying width of 7 metres. The distributor shall be equipped with a spray bar heating device, circulating spray bars, or other suitable device to ensure a uniform viscosity and pressure of the bituminous material at each nozzle, both before and during spraying operations. Feed manifolds or spray bars shall be provided with strainers to prevent clogging of bars and nozzles. The spray bar height shall be adjusted and set at such a height that the spray fan from any nozzle overlaps the spray fan from the adjacent nozzle by 50%. This adjustment shall be made and the height set when the distributor is one-half full, and shall be changed only when so permitted by the City.
 - (f) **Nozzles:** Spray bar nozzles which shall be so designed and set as to ensure a uniform fan-shaped spray without atomization, overlapping on the surface to be sprayed, such that a uniformly sprayed surface will result. Spraying to clearly defined edges of the sprayed lane with no tapering off of the rate of application adjacent to the edges of the lane will be required. All spray nozzles shall be of the same manufacture, size and type, and shall be provided with valves capable of instant full opening and positive cutoff. All spray nozzles shall be set in the bar so that the nozzle slots make the same horizontal angle (15° - 30°) with the longitudinal axis of the bar.
 - (g) **Sampling Cock:** A sampling cock shall be provided on the spray bar or connecting line, and shall be readily accessible to allow field samples of the bituminous materials to be obtained directly from the distributor.

A hand sprayer may be used for small areas provided that, the sprayer meets the requirements of a and c, listed above and that the emulsion shall be agitated by mechanical means to provide a homogeneous mixture. Units that rely on hand operated pumps to control the pressure will not be permitted.

TS 3.20.07 CONSTRUCTION

When specified in the contract or when ordered by the City, (due to the previous asphalt lift or concrete base becoming dirty with mud or dust coated, or for any other reason he deems necessary) all designated pavement surfaces which are to be covered with hot mix shall be coated with SS-1H asphalt emulsion diluted with an equal volume of water.

The asphalt base course or concrete base shall be swept clean with a power broom, or other approved equipment that shall leave a clean, dry surface, free of dust and other objectionable material.

The diluted SS-1H emulsion shall be applied to the surface immediately following the cleaning of the surface, at the rate of 0.35 kg/m². The tack coating shall form a thin, unbroken film on the asphalt base course or concrete base and be allowed to dry until it is in a proper condition of tackiness to receive the asphalt course. Tack coat shall be applied ahead of the paver to accommodate no more than two (2) hours of production of the hot mix.

The tack coat shall be protected from damage until covered by the asphalt surface course.

TS 3.20.08 QUALITY ASSURANCE

Representative samples of material may be taken to insure conformance with the requirements of OPSS 1103.

TS 3.20.09 MEASUREMENT FOR PAYMENT

TS 3.20.09.01 Tack Coat

Measurement for the above item shall be the area tack coated, in square metres (m²).

TS 3.20.10 BASIS OF PAYMENT

TS 3.20.10.01 Tack Coat

Where there is no separate tender item for “tack coat”, payment at the contract price for the appropriate tender item for hot mix to be placed on the tack coat shall include full compensation for all labour, equipment, materials and incidentals for the tack coating.

If the application of the tack coat was necessitated through the fault of the Contractor as determined by the City, no payment shall be made for any labour, equipment, material or incidentals involved in the application of the tack coat.

Payment for tack coating completed in association with bridge deck waterproofing shall be deemed to be included in the bridge deck waterproofing item.

TS 3.20.10.02 Tack Coat - Item

Where there is a separate contract item for tack coat, payment at the contract price shall be full compensation for all labour, equipment, material and incidentals required to do the work, as specified above.

If the application of the tack coat was necessitated through the fault of the Contractor, as determined by the City, no payment shall be made for any labour, equipment, material or incidentals involved in the application of the tack coat.