

ASPHALT PRIME

1.0 ASPHALT PRIME - GENERAL

1.1 DESCRIPTION

- .1 This section specifies requirements for asphalt prime.
- .2 The work includes supply of asphalt prime material, preparation of granular base course and placing of prime coat.

1.2 RELATED WORK

- .1 Granular Base - Section 05020
- .2 Hot Mix Asphalt Concrete Paving - Section 05140

1.3 SAMPLES

- .1 At least four (4) weeks prior to commencing work submit to the Engineer two (2) - five (5) litre containers of asphalt prime proposed for use. Submit emulsified asphalt samples in plastic containers.
- .2 Provide access for Engineer to sample material actually incorporated into work as required.

1.4 MATERIALS CERTIFICATION

- .1 Upon request submit Manufacturer's test data and certification that asphalt prime material meets requirements of this section.

1.5 MEASUREMENT FOR PAYMENT

- .1 Asphalt prime will be measured in square metres of prime coat placed in accordance with the requirements specified in this section.
- .2 Application of sand bladder material, if approved or directed by the Engineer, is incidental to the work required in this section.
- .3 Application of asphalt prime to edges of existing curbs, gutters, headers, manholes and like structures is incidental to the work required in this section.

2.0 PRODUCTS

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2.1 MATERIALS

- .1 Asphalt Prime: anionic emulsified asphalt, slow setting (SS-1) to the following requirements:

REQUIREMENTS TESTS ON EMULSION	ASTM TEST	METHOD	MIN	MAX.
Saybolt Viscosity, Furol		D244	20	
Seconds at 25 C				60
Residue By Distillation,		D244	55	
% By Mass				-
Settlement In 5 Days,	D244		-	
% By Mass				5
Storage Stability Test, 24 hr., % By Mass	D244	-		1
Sieve Test, % Retained On a No. 1 000 Sieve, % By Mass	D244	-		0.10
Cement Mixing Test, % By Mass	D244	-		2.0

TEST ON RESIDUE

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Penetration At 25 C, 100 g, 5 Sec, dmm	D5	100	200
Ductility At 25 C, cm	D113	60	-
Solubility In Trichlore- thylene, % By Mass	D2042	97.5	-

- .2 Sand Blodder: Clean granular material, free from organic matter or other deleterious materials, to the following gradation requirements:

<u>SIEVE SIZE</u>	<u>% PASSING</u>
5 000	100
80	0-8

3.0 EXECUTION

3.1 EQUIPMENT

- .1 Pressure Distributer:
- .1 Designed, equipped, maintained and operated so that asphalt material at uniform temperature may be applied uniformly on variable widths of surface up to five (5m) metres readily determined and controlled rates from 0.2 to 5.4 L/m² with uniform pressure, and with an allowable variation from any specified rate not exceeding 0.1 L/m².
 - .2 Capable of distributing asphalt material in uniform spray without atomization at temperature required. The spray patterns may be alternate nozzles shall meet with no overlap, to avoid streaking. Nozzles shall be of the same manufacturer, size, and type, and shall be set in the spray bar so that all nozzle slots make the same angle with the longitudinal axis of the spray bar.
 - .3 Equipped with meter registering lineal metres per minute, visibly located to enable operator to maintain constant speed required for application at the specified rate.
 - .4 Pump equipped with flow meter registering litres per minute passing through the nozzles and visible to the operator of the distributor. The pump shall operate by a separate power unit independent of the truck.

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- .5 Equipped with an easily read, accurate and sensitive device which registers the temperature of the liquid in the reservoir.
- .6 Equipped with accurate volume measuring device or calibrated tank.
- .7 Equipped with heating attachments and circulation or agitation capability.

3.2 APPLICATION

- .1 Obtain Engineers' approval of granular base surface before applying asphalt prime.
- .2 Emulsified Asphalt:
 - .1 Dilute asphalt emulsion with clean water at two (2) parts emulsion to one (1) part water for application. Mix thoroughly by pumping or other method approved by Engineer.
 - .2 Temperature condition blended emulsion to between 20 C and 50 C.
 - .3 Apply diluted asphalt emulsion at a rate of 2 L/m² or as directed by Engineer.
 - .4 Apply on uniformly damp surface unless otherwise directed.
- .3 Paint contact surfaces of curbs, gutters, headers, manholes and like structures with a thin, uniform coat of asphalt material.
- .4 Do not apply prime coat when air temperature is less than 5 C or when rain is forecast within two hours (2 hrs).
- .5 Where traffic is to be maintained, treat no more than one-half (1/2) width of surface in one (1) application.
- .6 Prevent overlap at junction of spreads.
- .7 Avoid priming surfaces that will be visible when paving is complete.
- .8 Correct areas not sufficiently covered.
- .9 Keep traffic off primed areas until asphalt prime has cured.
- .10 Permit prime to absorb and cure for 24 hours before placing asphalt paving

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mixtures, unless otherwise approved by Engineer.

3.3 USE OF SAND BLODDER

- .1 If asphalt prime fails to penetrate within 24 hours, spread approved sand blodder material in amounts required to absorb excess material.
- .2 Sweep and remove excess blodder material.