

SCOPE OF WORK

1. PURPOSE

The purpose of this specification is to establish an annual requirement contract for the purchases of high-performance cold patch material. Known acceptable high-performance cold patch materials are the following: UPM, Sylcrete, E-Z Street, and SPM. The City reserves the right to request samples of products being bid prior to award of the bid.

2. PRODUCT SPECIFICATION

1. General Description:

The bituminous patching material shall consist of crushed stone, asphaltic concrete with asphalt additives.

Temperature Range:

The mix must be capable of being placed in air temperature ranging from –15° F to 100° F and shall maintain its flexibility and cohesiveness.

Weather Conditions:

The mix must be capable of being placed in areas, which are damp or wet at the time of application.

2. Materials

A. Aggregate

- a. Aggregate will consist of a crushed limestone or City of Arlington approved equal, complying with requirements of ASTM C-136.
- b. Aggregate gradation shall have a maximum particle size of 12.5 millimeters (½ inch).

Sieve Size	#9	#89
	% Passing	% Passing
A	100	90-100
#4	85-100	20-55
#8	10-40	5-30
#16	0-10	0-10
#50	0-5	0-5

ASTM-88	Soundness loss (sodium –5 cycles)	12% Maximum
ASTM C-131	Los Angeles Abrasion Loss	40% Maximum
ASTM C-117	200 sieve (by Wash)	2% Maximum
ASTM C-127, 128	Absorption	1% - 3%
ASTM C-127, 128	Specific Gravity	2.45 – 2.85

Other Deleterious Matter

ASTM C-123	Soft pieces	3% Maximum
7ASTM C-295	Coal and Lignite	1% Maximum
ASTM C-142	Shale, Cherk, Shady Material, etc.	2.5% Maximum

B. Bituminous Material: The material shall be a liquid asphalt blend prepared from a base asphalt stock of either AC-5, AC-10, or AC-20 with an approved blending formula and shall meet the following requirements.

C. Liquid Asphalt:

ASTM D-2171	Kinematic Viscosity @140°F (60°C)	350 to 500 CST
ASTM D-1310	Flash Point (Tag Open Cup)	200° F (93°C)
ASTM D-95	Water	Less than 0.2%
ASTM D-402	Distillation	See values below

Temperature	Volume % total Distillate		Volume 5 Original Sample	
	Minimum	Maximum	Minimum	Maximum
To 437°F (225°C)	0	0	0	0
To 500°F (260°C)	0	0.5	0	0
To 600°F (316°C)	10	65	0	18

Residue from distillation to 680°F
(360° C) % Volume by Difference

Tests on Residue from Distillation

ASTM D-2171	Absolute Viscosity @ 140°F (60°C)	125-425 Poises
ASTM D-5	Penetration, Modified with Cone	180 Minimum
ASTM D-113	Ductility, 39°F (4°C), 1 cm/minute	100 Minimum
ASTM D-2042	Solubility in Trichorethylene	99.0% Minimum

This test shall be performed in accordance with ASTM D-5, except that a penetration cone conforming to ASTM D217 shall be used in place of the standard penetration needle. The total moving weight of the cone and attachments shall be 150±0.1 grams. The transfer dish water level shall be lowered to less than the height of sample, and then water from the top of the sample shall be decanted before transferring from the bath to the penetrometer.

3. Composition of Mixture

The mixture shall consist of an aggregate conforming to Section 2(A), and a bituminous material conforming to Section 2(B) mixed in the following portions.

Aggregate	93.5% to 95.0%
Bituminous	5.0% to 6.5%

The patching mix shall meet the following requirements:

ASTM D-1664	Coating and Stripping	Above 95%
ASTM D-2172	Extraction of Bituminous Material	3.5% to 9%
Shelf Life	Visual	1 Year

PERFORMANCE GUARANTEE:

The supplier of the material shall guarantee the performance of the patching mix to meet the following requirements:

- The material shall remain workable in an uncovered stockpile, if applicable, for a period of 12 months.
- Repaired potholes shall not show any significant signs of shoving, rutting, tracking, or unraveling within a period of 12 months from the time of repair.
- In the event the material furnished does not meet all of the above requirements (regardless of weather, test's acceptability, methods of repair, or other condition), the City of Arlington reserves the right to require the material supplier to replace or to reimburse the City of Arlington for the unused portion of material found to be unsatisfactory.
- The supplier shall remove and replace unsatisfactory mix within 15 days of written notification.
- The supplier shall provide the address and telephone number of the point of contact responsible for the performance guarantee.