

ITEM 424 FINE GRADED POLYMER ASPHALT CONCRETE

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424.01 Description. This work consists of constructing a surface course of aggregate and polymer modified asphalt binder mixed in a central plant and spread and compacted on a prepared surface. The requirements of [401](#) apply, except as modified by this supplemental specification.

424.02 Composition. For Type A mixes use 8.5 percent modified asphalt binder by total mix weight.

For Type B mixes, submit a proposed [JMF](#) according to [441.02](#) to the Laboratory that meets the requirements of a Type 1 surface course, except as follows:

- A. Minimum VMA, 15.0 percent
- B. Minimum total binder content, 6.4 percent
- C. Design air voids, 4.0 percent

424.03 Materials. Furnish clean, uncoated aggregate conforming to the applicable requirements of Table A 424.03-1 and quality requirements of [703.05](#).

Use a PG 76-22M asphalt binder or a PG 64-22 asphalt binder modified by adding 5.0 +/- 0.3 percent by weight Styrene Butadiene Rubber (SBR) solids. Conform SBR to [702.14](#). Provide mineral filler conforming to [703.07](#). Conform binders to [702.01](#).

Do not use reclaimed asphalt concrete pavement.

TABLE 424-01 - MIX GRADATION

Sieve	Type A (1, 2)	Type B (1, 3, 4)
½ inch (12.5 mm)		100
3/8 inch (9.5 mm)	100	95 to 100
No. 4 (4.75 mm)	95 to 100	85 to 95
No. 8 (2.36 mm)	90 to 100	53 to 63
No.16 (1.18 mm)	80 to 100	37 to 47
No. 30 (600 µm)	60 to 90	25 to 35
No. 50 (300 µm)	30 to 65	9 to 19
No. 100 (150 µm)	10 to 30	
No. 200 (75 µm)	3 to 10	3 to 8

(1) Gradation includes any mineral filler and is specified in percent passing.

(2) Use natural sand with at least 50 percent silicon dioxide by weight according to ASTM [C 146](#). Sources will be approved by Department.

(3) Fine Aggregate - Use natural sand with at least 50 percent silicon dioxide by weight according to ASTM [C 146](#). Sources will be approved by the Department. For medium mixes, use no more than 20 percent limestone sand by weight of total aggregate. For heavy mixes, use 20 percent limestone sand or air cooled slag sand by weight of total aggregate.

(4) Coarse Aggregate - For medium mixes, use 10 percent two-faced crushed aggregate by weight of total aggregate. For heavy mixes, use 100 percent two-faced crushed aggregate. Conform two-faced crushed aggregate to ASTM [D5821-95](#).

424.04 Mixing. Ensure the mixing plant conforms to [402](#). Discharge the mix from the plant at temperatures between 335°F to 370°F (168°C to 188°C) as required for good workability.

424.05 Weather Limitations. Do not place the asphalt concrete when the surface of the existing pavement is less than 60°F or the air temperature is less than 60°F.

424.06 Spreading and Finishing. Do not allow traffic on the compacted mixture until it has cooled sufficiently to prevent damage.

424.07 Surface Tolerances. Ensure the completed surface course conforms to [401.19](#).

424.08 Acceptance. Refer to Item [403](#) for acceptance requirements. Type A mixes will be accepted using the [301](#) procedures and Type B mixes will be accepted using the [448](#) procedures.

424.09 Basis of Payment. The Department will make payment for accepted quantities, completed in place, at the contract price for as follows:

Item	Unit	Description
424	Cubic Yard (Cubic Meter)	Fine Graded Polymer Asphalt Concrete, Type A
424	Cubic Yard (Cubic Meter)	Fine Graded Polymer Asphalt Concrete, Type B