

Section 802—Aggregates for Asphaltic Concrete

802.1 General Description

This section includes the requirements for fine and coarse aggregates used in asphaltic concrete.

802.1.01 Definitions

Fine Aggregate: All aggregate passing a No. 8 (2.36 mm) sieve

Coarse Aggregate: All aggregate retained on a No. 8 (2.36 mm) sieve

802.1.02 Related References

A. Standard Specifications

[Section 800—Coarse Aggregate](#)

[Section 828—Hot Mix Asphaltic Concrete Mixtures](#)

B. Referenced Documents

AASHTO T 27

AASHTO T 96

ASTM C 295

[GDT 63](#)

GDT 76

802.2 Materials

802.2.01 Fine Aggregate for Asphaltic Concrete

A. Requirements

Use the appropriate type, group, class, and grade of fine aggregate.

1. Types

Use fine aggregate made of sharp, strong, angular material meeting the required performance characteristics when combined into a mixture.

a. Ensure that the aggregate meets the following requirements:

- Does not contain any deleterious substances.
- Natural sand is free of organic matter, roots, or twigs.
- Aggregate is manufactured from Class A or B crushed stone, gravel, slag, or synthetic aggregate that meets the requirements of [Section 800](#).
- A combination of natural and manufactured sands meets the requirements in [Subsection 802.2.01.A.3](#) and [Subsection 802.2.01.A.4](#) after being combined.

b. Do not use crushed alluvial gravel as virgin aggregate in any mixture.

2. Groups

Fine aggregate groups include:

- a. Group I—Limestone, dolomite, marble, or combination thereof
- b. Group II—Gravel, slag, granitic and gneissic rocks, quartzite, natural sand, or a combination thereof

3. Sand Equivalent

Use these sand equivalent values:

Material	Sand Equivalent Value
Group I	At least 28

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Group II	At least 40
Natural sand	At least 25
Blended sand*	Natural sand at least 20; combined blend at least 25
*Blended natural sands or natural sand blended with stone screenings that meet the Group I or Group II sand equivalent limits.	

4. Mica

- a. Use fine aggregate with no more than 35 percent free mica in asphaltic concrete surface mixes.
- b. When approved by the Engineer, use fine aggregate with more than 35 percent mica if blended with natural sand or sand manufactured from Group II aggregates. Ensure the blend has no more than 35 percent free mica and meets all other requirements of this Section, [Section 800](#) and [Section 828](#).

5. Aggregate for Stone Matrix Asphalt

Manufactured screenings will be considered as fine aggregate and shall contain no more than 20 percent by weight coarser than a No. 4 (4.75 mm) sieve.

B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test the fine aggregate as follows:

Test	Method
Aggregate gradation	AASHTO T 27
Sand equivalent	GDT 63
Mica content	GDT 76 or ASTM C 295

D. Materials Warranty

General Provisions 101 through 150.

802.2.02 Coarse Aggregate for Asphaltic Concrete

A. Requirements

1. Types

Ensure coarse aggregate meets the following requirements:

- Class A or B crushed stone, gravel, slag, or synthetic aggregate as in [Subsection 800.2](#).
- Have uniform quality throughout without any deleterious substances.
- Meet the required performance characteristics when combined into a mixture.

NOTE: Do not use alluvial gravel as virgin aggregate.

2. Groups

Coarse aggregate shall be one of either group below as specified in the composition Table in [Subsection 828.2.A.2](#):

- Group I—Limestone, dolomite, marble, or combination thereof
- Group II—Gravel, slag, granite and gneissic rocks, quartzite, or combination thereof

3. Aggregate for Stone Matrix Asphalt

Use coarse aggregate that meets requirements of this Section and [Section 800](#) except as follows:

- Use Class A aggregate only with percent wear of each individual size not to exceed 45 percent based on the B grading of AASHTO T 96
- Use aggregate which contains no more than 20 percent flat and elongated pieces (length greater than three times the average thickness) for that portion of the blend of all aggregate retained on the No. 4 (4.75 mm) sieve.

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B. Fabrication

General Provisions 101 through 150.

C. Acceptance

Test as follows:

Test	Method
Coarse Aggregate	Subsection 800.2.01.C

D. Materials Warranty

General Provisions 101 through 150.