

## Section 4127. Aggregate for Hot Mix Asphalt

### 4127.01 DESCRIPTION.

- A. Crushed stone, gravel, slag, sand, and filler from an approved source. Crushed gravel may be used to satisfy crushed particle and friction requirements for HMA mixtures. Produce crushed gravel as a separate operation by crushing the portion of a gravel aggregate retained on a screen at least 1/4 inch (6 mm) larger than the sieve size that 100% of the gravel will pass after crushing.
- B. If a gravel aggregate has less than 5% retained on the No. 4 sieve (6 mm), the Engineer may replace the requirements of Table 4127.02-1 with the requirements of [Article 4127.03](#).

### 4127.02 COARSE AGGREGATE.

Meet the requirements of Table 4127.02-1:

**Table 4127.02-1: Coarse Aggregate Quality (Hot Mix Asphalt)**

Coarse Aggregate Quality	Type A Maximum %	Type B Maximum %		Test Method
		Primary	Other	
Abrasion	45	45	45	AASHTO T 96
Absorption	6.0	6.0	6.0	Office of Materials Test Method No. Iowa 201
Alumina <sup>(a)</sup>	0.7	1.5	2.5	Office of Materials Test Method No. Iowa 222
A Freeze	10	25	45	Office of Materials Test Method No. Iowa 211, Method A
C Freeze	N/A	10	10	Office of Materials Test Method No. Iowa 211, Method C
Clay Lumps/Friable Particles	0.5	N/A	N/A	<a href="#">Materials I.M. 368</a>
Organic Material	0.01	0.01	0.01	Office of Materials Test Method No. Iowa 215
(a) If the Alumina value fails, determine the A Freeze value for specification compliance. Office of Materials Test Method No. Iowa 222 does not apply to gravel.				

### 4127.03 FINE AGGREGATE.

- A. Natural sand containing no more than 0.01% organic matter when tested using Iowa Test Method 215. A gradation for wearing course mixture of no more than 50% retained between two consecutive standard sieves below the No. 4 (4.75 mm).
- B. Crushed gravel or stone processed from coarse aggregate meeting the requirements of [Article 4127.02](#).

**4127.04 COMBINED AGGREGATES.**

- A. Use aggregate, which does not contain adherent films of clay or other matter that will prevent coating of particles with asphalt binder. Meet gradations of [Materials I.M. 510](#).
- B. Maximum shale allowed in the fine portion of the combined materials:

**Table 4127.04: Maximum Shale Allowed**

<b>Aggregate Type</b>	<b>Maximum Percent Allowed</b>	<b>Test Method</b>
Type A	2.0	<a href="#">Materials I.M. 344</a>
Type B	5.0	<a href="#">Materials I.M. 344</a>

**4127.05 MINERAL FILLER.**

For fine material added to the mixture, separate from cold feed, meet the requirements for mineral filler in AASHTO M 17, except determine the gradation according to AASHTO T 11.