

SECTION 880 AGGREGATES FOR ASPHALT CONCRETE

880.1 GENERAL REQUIREMENTS

The physical characteristics and quality of aggregates for asphalt concrete shall conform to the specifications for the particular material required by the contract.

The aggregate shall not contain clay balls or organic debris and the particles shall be free from coating with clay or dust which prevents thorough coating with asphalt.

880.2 SPECIFIC REQUIREMENTS

- A. Mineral Aggregate:** The mineral aggregate **without the addition of hydrated lime** shall conform to the following requirements shown in Table 1:

TABLE 1

REQUIREMENTS	CLASS D		CLASS E		CLASS G		CLASS S
	TYPE 1	TYPE 2	TYPE 1	TYPE 2	TYPE 1	TYPE 2	
SIEVE	PERCENT PASSING*						
3/4" (19.0 mm)	100		100		100		
1/2" (12.5 mm)	75-95	100	75-95	100	75-95	100	100
3/8" (9.50 mm)							80-100
No. 4 (4.75 mm)	50-70	60-80	50-70	60-80	50-70	60-80	24-45
No. 8 (2.36 mm)	35-55	43-63	35-55	43-63	35-55	43-63	10-22
No. 16 (1.18 mm)	24-42	28-48	24-42	28-48	24-42	28-48	
No. 40 (425 F m)	14-28	14-30	14-28	14-30	14-28	14-30	
No. 200 (75 F m)	4.0-10.0	4.0-12.0	4.0-8.0	4.0-10.0	4.0-8.0	4.0-10.0	2.0-5.0
Processing Required	Crushed		Crushed		Crushed		Crushed
Liquid Limit (max)	25		25		25		25
Plasticity Index, (max)	4		3		3		3
L.A. Abra. Loss, (max)	40%		40%		40%		40%
Sodium Sulfate (Soundness) (Max.)							
+4 (4.75 mm) sieve	15%		15%		12%		12%
-4 (4.75 mm) sieve	15%		15%		12%		12%
Shale Content (lightwt part) (Max.)							
+4 (4.75 mm) sieve	4.0%		2.0%		2.0%		2.0%
-4 (4.75 mm) sieve	4.0%		2.0%		2.0%		2.0%
Crushed Particles (Min.)							
+4 (4.75 mm) sieve	30% 1-FF		50% 2-FF		50% 2-FF		90% 2-FF

AGGREGATES FOR ASPHALT CONCRETE

* - A tolerance of 3 % in the amount passing the maximum size screen will be permitted providing all material passes a screen having 1/4 inch (6.3 mm) larger openings.

B. Classes D, E, and G:

1. Filler **for mineral aggregate** shall consist of fine inert silt or stone dust which is essentially free from lumps. The material shall be fine enough, that when pulverized for testing, that 90 percent by dry weight will pass a No. 40 (425Fm) sieve and 60 percent by dry weight will pass a No. 200 (75Fm) sieve. The linear shrinkage shall not exceed four percent and the plasticity index shall not exceed six. The material shall be such that not more than 25 percent by volume will separate from asphalt in the presence of water. During production the filler shall be screened over a screen of a size corresponding to the maximum size of the mineral aggregate. A larger size screen may be permitted or a smaller size required, if necessary, to facilitate production or to remove objectionable material. Lumps shall be pulverized prior to blending.

Mineral filler for mineral aggregate may be substituted for filler for mineral aggregate.

2. Crushed rock **for mineral aggregate** shall consist of hard durable fragments of particles of rock, free of stripping dirt, vegetable matter, and foreign substance. **Crushed rock shall conform to the following requirements:**

Passing No. 3/4 (19.0 mm) sieve	100%
Passing No. 1/2 (12.5 mm) sieve	40-65%
Passing No. 4 (4.75 mm) sieve	0-15%
Passing No. 8 (2.36 mm) sieve	0-10%
Passing No. 40 (425Fm) sieve	0-5%
Sodium Sulfate (Soundness) +No. 4 (4.75 mm) sieve	12% max
Shale Content (Lt. Wt. Particles) +No. 4(4.75 mm) sieve...	20% max

3. Sand **for mineral aggregate** shall consist of sandy soil or crushed stone screenings. The sand shall be uniform in composition. Seams, layers, or pockets of soil encountered not meeting sand requirements shall be wasted. During production, the sand shall be screened over a screen of a size corresponding to the maximum size of the mineral aggregate. A larger size screen may be permitted or a smaller size required, if necessary, to facilitate production or to remove objectionable material.

The sand shall be pulverized at the pit prior to loading and shall meet the following requirements by dry weight:

Passing No. 4 (4.75 mm) sieve	100%
Passing No. 8 (2.36 mm) sieve	50-100%

AGGREGATES FOR ASPHALT CONCRETE

Passing No. 16 (1.18 mm) sieve	20-80%
Passing No. 40 (425F m) sieve	10-50%
Passing No. 200 (75F m) sieve	0-20.0%
Liquid Limit	25 max
Plasticity Index	3 max
Sodium Sulfate (Soundness)	12% max
Shale Content (Lt. Wt. Particles).....	20% max

4. Mineral filler **for mineral aggregate** shall consist of finely ground particles of stone, fly-ash, lime, or Portland Cement. It shall be thoroughly dry and free from lumps. It shall meet the following gradation requirements by dry weight when tested in accordance with AASHTO T 37:

Passing a No. 4 (4.75 mm) sieve	100%
Passing a No. 40 (475F m) sieve	90-100%
Passing a No. 80 (180F m) sieve	85-100%
Passing a No. 200 (75F m) sieve	65-100%

5. Hydrated lime shall meet the requirements of Section 760.

880.3 SAMPLING AND TESTING

Sampling	SD 201
Gradation	SD 202
Liquid Limit and Plasticity Index	SD 207
L.A. Abrasion Test	AASHTO T 96
Linear Shrinkage (Filler)	SD 303
Soundness Test (Sodium Sulfate Solution) (Five Cycles)	SD 220
W.A.P. Test (Filler)	SD 304
Crushed Particle Test	SD 211
Shale	SD 208 & SD 214