

TABLE A
FINE AGGREGATE
Grading and Quality Requirements

Sieve Size	Cement Concrete Sand	Bituminous Concrete Sand Type B				Mortar Sand
	Type A	#1	#2	#3	Filler	Type C
9.5 mm (3/8 -inch)	100	100		100		
4.75 mm (No. 4)	95-100	95-100	100	80-100		100
2.36 mm (No. 8)	70-100	70-100	95-100	65-100		95-100
1.18 mm (No. 16)	45-85	40-80	85-100	40-80		
600 m (No. 30)	25-65	20-65	65-90	20-65	100	
300 m (No. 50)	10-30	7-40	30-60	7-40	95-100	
150 m (No. 100)	0-10	2-20	5-25	2-20	90-100	0-25
75 m (No. 200)		0-10	0-5	0-10	70-100	0-10
Material Finer Than 75 m (No. 200) Sieve Max. Percent Passing	3					
Strength Ratio Min. Percent	95					95
Soundness Test Max. Loss Percent	10	15	15	15		10
Fineness Modulus	2.30 to 3.15					1.6 to 2.5

703.2 COARSE AGGREGATE

(a) General. Coarse aggregate consists of hard, tough, durable, uncoated, inert particles, reasonably free from clay, silt, vegetation, or other substances determined to be deleterious. Substances which are present in amounts to cause inconsistent performance in the properties of the plastic or hardened concrete are considered deleterious. Such substances as chert, gypsum, iron sulfide, amorphous silica and hydrated iron oxide are considered deleterious. Only coarse aggregate reasonably uniform in the physical properties specified in Tables B, C, and D will be acceptable.

The MTD will evaluate the quality of the aggregates by petrographic analysis, using ASTM C 295 and other tests necessary to demonstrate that required construction of acceptable durability can be achieved.

Furnish aggregate crushed and prepared from one of the materials described below, obtained from a source listed in Bulletin 14, or otherwise accepted by the MTD prior to use.

1. Stone. Durable stone, free from slaty texture or cleavage planes.
2. Gravel. Durable gravel particles. For use in cement concrete, wash thoroughly during production. For use in heavy duty bituminous base courses, heavy duty binder courses, and all bituminous wearing courses, a minimum of 85% crushed particles is required, with at least two faces resulting from fracture. For use as No. OGS, a minimum of 75% crushed particles is required, with at least three faces resulting from fracture. For all Type A use, the maximum allowable absorption as determined by PTM No. 506 is 3.0%; however, this restriction does not apply to dredged river gravel to be used in portland cement concrete. For all Type B use, the maximum allowable absorption as determined by PTM No. 506 is 3.5%.
3. Blast Furnace Slag. By-product of a pig-iron making process. Tough, hard, durable pieces of air-cooled blast furnace slag.
4. Steel Slag. By-product of a steel making process. Tough, hard, durable, pieces of steel slag, reasonably uniform in density and quality. After crushing, grading and forming a stockpile, take a sample from the stockpile and submit it to the MTD for testing to determine expansive characteristics, in accordance with PTM No. 130. The stockpile will be accepted for use if the total expansion, as determined by PTM No. 130, is less than