



STANDARD SPECIFICATIONS
FOR
GRAVEL FOR BITUMINOUS CONCRETE BASE¹
A.S.T.M. Designation: D 309 - 30

These specifications are issued under the fixed designation D 309; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

ISSUED AS TENTATIVE, 1929; ADOPTED, 1930.

- Scope. 1. These specifications cover $\frac{3}{4}$ to $1\frac{1}{4}$ -in. and $\frac{1}{4}$ to $2\frac{1}{2}$ -in. size gravel, either of which sizes is suitable for use in the construction of a bituminous concrete base prepared by the mixing method and upon which may be placed any type of surface course.
- General Characteristics. 2. The gravel shall consist of hard, sound,² tough, durable stone particles, either crushed or uncrushed, and shall be free from injurious amounts of adherent coatings and soft, thin, elongated or laminated pieces, or other deleterious substances.
- Abrasion. 3. Gravel shall show a satisfactory resistance to abrasion as measured by an acceptable abrasion test for gravel.

NOTE.—No test limits for abrasion are specified due to the status of knowledge concerning suitable specification limits for this test. Many engineers feel that the quality of gravel may be indicated by the results of an abrasion test, and accordingly the Tentative Method of Test for Abrasion of Gravel (A.S.T.M. Designation: D 289 - 28 T) of the American Society for Testing Materials³ is recommended.

- Deleterious Substances. 4. The amount of deleterious substances shall not exceed the following maximum requirements:

¹ Under the standardization procedure of the Society, these specifications are under the jurisdiction of the A.S.T.M. Committee D-4 on Road and Paving Materials.

² No suitable test for soundness of gravel has been developed, although the committee is carrying out work looking forward to the development of such a test. An accelerated test using sodium sulfate has been proposed for use with crushed stone (see Proposed Method of Test for Soundness of Coarse Aggregate, *Proceedings*, Am. Soc. Testing Mats., Vol. 28, Part I, p. 361 (1928)), but without a modification in the procedure this test is not considered suitable for a heterogeneous material such as gravel.

³ *Proceedings*, Am. Soc. Testing Mats., Vol. 28, Part I, p. 940 (1928); also 1930 Book of A.S.T.M. Tentative Standards, p. 443.