



Designation: D311 - 84

AMERICAN SOCIETY FOR TESTING AND MATERIALS
1916 Race St., Philadelphia, Pa. 19103

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Standard Method for SIEVE ANALYSIS OF CRUSHED BITUMINOUS COAL¹

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1. Scope

1.1 This method covers the sieve analysis of rather coarsely crushed bituminous coal, less than 1½ in. (37.5 mm) in size, such as is charged into coke ovens. It is not applicable to the testing of powdered coal as used in boiler plants.

1.2 The values stated in inch-pound units are to be regarded as the standard.

1.3 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Applicable Documents

2.1 ASTM Standards:

D346 Method of Collection and Preparation of Coke Samples for Laboratory Analysis²

D410 Method of Sieve Analysis of Coal²

E 11 Specification for Wire-Cloth Sieves for Testing Purposes³

3. Significance and Use

3.1 This method concerns the separation of crushed bituminous into definite size fractions for purposes of characterizing the material for further processing or for commercial purposes.

4. Sieves

4.1 Square-hole sieves of the following sieve openings, conforming to Specification E 11, shall be used:

Size	Sieve Opening, in.
3.35 mm (No. 6)	0.132
4.75 mm (No. 4)	0.187
6.7 mm	0.265
9.5 mm	0.375
13.2 mm	0.530

19.0 mm	0.750
26.5 mm	1.06

4.2 Sieves of double-crimped wire with circular frames about 18 in. (457 mm) in diameter are satisfactory.

5. Collection of Gross Sample

5.2 For collecting gross samples of crushed bituminous coal, the procedure described in Method D410 shall apply.

6. Preparation of Laboratory Sample

6.1 The gross sample of coal shall be thoroughly mixed and reduced by quartering, without crushing, to a laboratory sample of approximately 60 lb (27 kg) in accordance with Method D346 and Method D410. In case the coal is wet, air-dry the gross sample before reduction to the 60-lb laboratory sample.

7. Procedure

7.1 Accurately weigh the laboratory sample (approximately 60 lb (27 kg)). Starting with the sieve having the largest opening, sieve the laboratory sample of coal in such increments as will allow the pieces to be in direct contact with the meshes after the completion of the shaking of each increment. In sieving, shake the coal rather vigorously, in order to up-end the pieces, until practically no more coal will pass through the openings. Weigh separately the coal retained on each sieve and that which passes the smallest sieve.

¹ This method is under the jurisdiction of ASTM Committee D-5 on Coal and Coke and is the direct responsibility of Subcommittee D05.07 on Physical Characteristics of Coal.

Current edition approved Nov. 30, 1984. Published January 1985. Originally published as D311 - 29 T. Last previous edition D311 - 30 (1976).

² Annual Book of ASTM Standards, Vol 05.05.

³ Annual Book of ASTM Standards, Vol 14.02.