



Standard Practice for Carbon Black—Sampling Packaged Shipments¹

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1. Scope

1.1 This practice covers the sampling of packaged carbon blacks for shipment in bags, cartons, flexible intermediate bulk containers (FIBC), or other non-bulk packages.

NOTE 1—The tests to be made on the samples obtained by this practice shall be determined by the producer and the consumer. The specific details of each test method are described in appropriate ASTM methods used for testing carbon black.

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 1509 Test Method for Carbon Black-Heating Loss²

D 5817 Practice for Carbon Black, Pelleted—Reduction, Blending, and Drying Gross Samples for Testing²

3. Significance and Use

3.1 This practice is for use in obtaining representative samples of carbon black from the packages in the shipment. These samples are used to determine the average quality or variability of the shipment.

4. Apparatus

4.1 *Sample Splitter*, riffle-type (see Practice D 5817 for equipment information).

4.2 *Sample Containers*, airtight, 4 dm³ (1-gal) capacity.

4.3 *Scoop*, sample.

5. General

5.1 Packaged shipments of carbon blacks most often consist of 11.35–kg (25–lb), 22.7–kg (50–lb), 25–kg (55–lb), or 50–kg

(110–lb) bags. Flexible intermediate bulk containers usually range in size from 180 kg (396 lb) to 1300 kg (2860 lb). This practice may be applied to bags or FIBCs of other sizes. These packages are loaded into vans in definite patterns agreed upon by the producer and the consumer. These may be in the form of unit loads, stacks, or individual FIBCs. In each case, a shipment involves a given number of packages, units, tiers, or mass.

5.2 Samples are taken to evaluate conformance to specified requirements. Multiple samples may be taken to evaluate conformance or uniformity, or both, of a lot. The number of samples, their location within the lot, and the quantity of the samples is determined by the purpose for taking the samples. A lot shall be sampled as prescribed at the point of manufacture or at the receiving point as agreed upon by the producer and the consumer. Samples may be taken from the packages as loaded or as received. Each sample taken shall represent a unit, lot, or approximately equal mass of material. Generally, it is desirable to take one sample to represent each 5000 kg (11 000 lb) increment of the lot. For smaller lot sizes being sampled for uniformity, three samples representing approximately equal masses are recommended. If the uniformity of the lot is suspect or unknown, more samples may be required. For lots with known acceptable uniformity, one sample may be sufficient.

5.3 The size of the individual sample taken shall be determined by the purpose for taking the sample; the quantity needed to perform the expected test(s) with enough to repeat a test, if needed; whether the sample will be tested individually or in a composite; and the quantity needed for blending. For all samples except those taken directly from a bag, a minimum of 4 dm³ (1 gal) is recommended. The 4 dm³ (1 gal) minimum sample size is recommended because pelleted carbon blacks tend to stratify. When sampling directly from an individual bag, the mass removed must be small enough that it does not adversely affect the final mass remaining in the bag to render it unsuitable for use.

NOTE 2—Pellet quality tests may be erroneous due to a local or spotty condition unless the samples are blended through the sample splitter as described in Practice D 5817.

¹ This practice is under the jurisdiction of ASTM Committee D24 on Carbon Black and is the direct responsibility of Subcommittee D24.61 on Carbon Black Sampling and Statistical Analysis.

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² *Annual Book of ASTM Standards*, Vol 09.01.