



Standard Test Method for Designating the Size of RDF-3 From its Sieve Analysis¹

This standard is issued under the fixed designation E 828; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method of designating the size of refuse-derived fuel from its sieve analysis is applicable to the classified light fraction (RDF-3) of shredded municipal or industrial waste materials less than 0.15 m (6 in.) in size.

1.2 The values stated in acceptable metric units are to be regarded as standard. The values given 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.* For more specific precautionary information see Section 7.

2. Referenced Documents

2.1 ASTM Standards:²

- D 2234 Test Method for Collection of a Gross Sample of Coal
- E 11 Specification for Wire-Cloth Sieves for Testing Purposes
- E 177 Practice for Use of the Terms Precision and Bias in ASTM Test Methods

3. Terminology

3.1 Definitions:

3.1.1 *air drying*—a process of partial drying of RDF-3 to bring its moisture content near to equilibrium with the atmosphere in the room in which the sieving is to take place.

3.1.2 *gross sample*—a sample representing a lot of RDF and composed of a number of increments on which neither reduction nor division has been performed.

3.1.3 *laboratory sample*—a representative portion of the gross sample delivered to the laboratory for further analysis.

3.1.4 *lot*—a large designated quantity of RDF-3.

3.1.5 *representative sample*—a sample collected in such a manner that it has characteristics equivalent to the material being sampled.

3.1.6 *sample division*—the process of extracting a smaller sample from a gross sample wherein the representative properties of the large sample are retained.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *refuse-derived fuel (RDF-3)*—a shredded fuel derived from municipal solid waste (MSW) that has been processed to remove metal, glass, and other inorganics. This material has a particle size such that 95 weight % passes through a 2-in. square-mesh screen.

NOTE 1—Other refuse-derived fuel may be classified as follows:

- RDF-1—Wastes used as a fuel in as-discarded form.
- RDF-2—Wastes processed to coarse particle size with or without ferrous metal separation.
- RDF-4—Combustible waste processed into powder form, 95 weight % passing 10-mesh screening.
- RDF-5—Combustible waste densified (compressed) into the form of pellets, slugs, cubettes, or briquettes.
- RDF-6—Combustible waste processed into liquid fuel.
- RDF-7—Combustible waste processed into gaseous fuel.

4. Summary of Test Method

4.1 This test method covers the separation of an RDF sample into defined size fractions and expressing those fractions as a weight percent of an air-dried sample.

5. Significance and Use

5.1 The purpose of this test method is to provide a means of designating the size classification of RDF-3 for use by consumers and producers of RDF-3.

6. Apparatus

6.1 Sieves:

6.1.1 Use sieves conforming to Specification E 11. For recommended sizes see Table 1.

6.1.1.1 For RDF-3 and larger than 50 mm (2 in.) screens having rectangular frames 0.6 to 0.7 m² (6 to 8 ft²) sieve area are satisfactory.

6.1.1.2 For RDF-3 50 mm (2 in.) or smaller, rectangular frames having 2 to 4 ft² (0.2 to 0.4 m²) sieve area are satisfactory.

¹ This test method is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.03 on Treatment. Current edition approved July 31, 1981. Published February 1982.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.