



Standard Specification for Loose-Fill Rubber for Use as a Playground Safety Surface under and around Playground Equipment¹

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INTRODUCTION

Recycled rubber used in loose-fill applications is found in a wide variety of products, including landscaping mulch, equestrian surfacing, artificial turf in-fill, and resilient playground surfacing. The goal of this specification is to provide test methods and performance requirements for loose-fill rubber playground-surfacing products. It is intended to complement existing ASTM International standards for determining the shock attenuation and accessibility of a playground surface. This specification will assist playground designers and specifiers, owner/operators, and playground-surfacing suppliers in evaluating loose-fill rubber products for playground use.

1. Scope

1.1 This specification establishes test methods and performance requirements for particle size distribution, extractable hazardous metal content, total lead content, tramp metal content, and sharp tramp metal content for loose-fill rubber that is intended to be used as a playground surface.

1.2 This specification does not contain test methods or performance requirements for the accessibility of loose-fill rubber playground surfacing. The specification also does not establish test methods or performance requirements to characterize the release of organic chemicals from loose-fill rubber intended to be used as a playground surface. **Appendix X1** and **Appendix X2** contain additional information on these topics.

1.3 If loose-fill rubber which meets the requirements of this standard is to be installed in the use zone of playground equipment, it must also comply with Specification **F1292**.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *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:²

C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates

D1193 Specification for Reagent Water

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

E1613 Test Method for Determination of Lead by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES), Flame Atomic Absorption Spectrometry (FAAS), or Graphite Furnace Atomic Absorption Spectrometry (GFAAS) Techniques

F963 Consumer Safety Specification for Toy Safety

F1292 Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment

2.2 U.S. EPA Standards and Methods:³

EPA Method 3050B Acid Digestion of Sediments, Sludges and Soils; SW 846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods

EPA Method 3051A Microwave Assisted Acid Digestion of Sediments, Sludges and Soils; SW 846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods

EPA Method 6010B Inductively Coupled Plasma-Atomic Emission Spectrometry; SW 846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods

¹ This specification is under the jurisdiction of ASTM Committee **F08** on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee **F08.63** on Playground Surfacing Systems.

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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.

³ Available from the U.S. EPA, Office of Resource Conservation and Recovery, (5305P), 1200 Pennsylvania Ave., N.W., Washington, DC 20460.