



Designation: D7307 – 21

Standard Practice for Sampling of Thermoplastic Pavement Marking Materials¹

This standard is issued under the fixed designation D7307; 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 practice covers the proper field sampling of thermoplastic pavement marking materials to ensure test results are representative of the material being tested.

1.2 The values stated in SI units are to be regarded as the 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D346 Practice for Collection and Preparation of Coke Samples for Laboratory Analysis

D2013 Practice for Preparing Coal Samples for Analysis

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *thermoplastic pavement marking material, n*—a highly filled 100 % total solids highway marking material that when heated to a molten state can be extruded or sprayed onto a road surface and when cooled forms a solid, durable delineator.

¹ This practice is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.44 on Traffic Coatings.

Current edition approved Nov. 1, 2021. Published November 2021. Originally approved in 2006. Last previous edition approved in 2016 as D7307 – 06 (2016). DOI: 10.1520/D7307-21.

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.

4. Summary of Practice

4.1 A random selection of three bags of thermoplastic pavement marking material is made from a manufactured lot. Using one of the three size reduction methods outlined in this procedure a small, representative sample of the manufactured lot is obtained. This sample may then be used for the testing of the chemical and physical properties of the marking material.

5. Significance and Use

5.1 It is important to obtain a truly representative sample of the thermoplastic pavement marking material prior to performing any tests. This can be difficult due to the wide ranges of sizes, shapes, and densities of the individual components that are used in the manufacture of these types of materials. The sample that is obtained using this guide should be representative of the manufactured lot from which it was obtained and can be used for the testing of the chemical and physical properties of the material as required by the governing specification.

6. Apparatus (See **Note 1**)

6.1 *Quartering Method:*

6.1.1 *1.2 by 1.2 m (4 by 4 ft) Section of Cardboard, Smooth Plywood, or Metal.*

6.1.2 *Metal Scooping Pan.*

6.1.3 *Metal Splitting Device*, consisting of four panels separated from each other at a 90 degree angle and joined at the center.

6.1.4 *Unlined 3.78 L (1 gal) Metal Cans.*

6.2 *Splitter Method:*

6.2.1 *1:1 Splitter Apparatus*, with pans with a minimum capacity of 28.3 L (1 cubic foot).

6.2.2 *Unlined 3.78 L (1 gal) Metal Cans.*

6.3 *Thieving Method:*

6.3.1 *5 cm (2 in.) ID Metal Pipe*, approximately 1 m (3 ft) long.

6.3.2 *Unlined 3.78 L (1 gal) Metal Cans.*

NOTE 1—The quartering procedure for reducing bulk samples, to obtain representative test samples, is described and illustrated in Practice D346. Various types of riffle samplers are illustrated in Practice D2013.

7. Hazards

7.1 Consult the material safety data sheet for the material being tested and follow the recommendations for the handling