



Standard Practice for Sample Preparation of Thermoplastic Traffic Marking Materials¹

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1. Scope

1.1 This practice covers the proper preparation of test specimens of thermoplastic traffic marking materials obtained 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D7307 Practice for Sampling of Thermoplastic Traffic Marking Materials

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *thermoplastic traffic 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.

4. Summary of Practice

4.1 The thermoplastic traffic marking material is prepared for the testing of various physical and chemical properties as outlined in the governing specification by melting a sample of the marking material to its application temperature under continuous agitation. Depending upon the requirements of the

governing specification the sample can then be exposed to the required heating time and conditions prior to the preparation of the test specimens or the test specimens may be prepared immediately after the material has reached application temperatures.

4.2 If required by the governing specification that the sample be subjected to extended periods of heating prior to the preparation of the test specimen in order to determine the effect of heat history upon various physical or chemical properties, the sample must be melted down in the prescribed manner prior to being subjected to such conditions.

5. Significance and Use

5.1 This practice provides a standard procedure for the preparation of thermoplastic traffic marking material test specimens prior to testing for various properties as called for in the governing specification. Specimens that are prepared using this standard methodology yield test results that are consistent with the material from which it was sampled. Test results from specimens can be used to determine compliance of the thermoplastic traffic marking material to the specification. This sample preparation guide can also be used by manufacturers of these materials to prepare specimens for testing to determine the uniformity of thermoplastic traffic marking materials from batch to batch.

5.2 This practice does not address any issues related to specific testing of the thermoplastic pavement marking materials for any physical or chemical property.

6. Apparatus

6.1 *Procedure A (Preferred):*

6.1.1 *Stainless Steel 4000 ml Beaker, 150 by 230-mm diameter high.* Alternatively an unlined 0.95 L (1 qt) or 3.48 L (1 gal) can may be used depending on the sample size.

6.1.2 *Heating Mantle* of sufficient size. Note that aluminum foil may be used to serve as somewhat of a gasket if an unlined metal can is to be used in the heating mantle in place of the stainless steel beaker.

6.1.3 *Temperature Indicator.*

6.1.4 *Thermocouple, iron.*

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.

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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.