



Standard Test Method for Solidification Point of Industrial Organic Chemicals by Thermistor¹

This standard is issued under the fixed designation D6875; 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 covers a general procedure for determining the solidification point of most organic chemicals having appreciable heats of fusion and solidification points between 4 and 41°C.

NOTE 1—Other test methods for determining freeze point and solidification point of aromatic hydrocarbons include Test Methods [D852](#), [D1015](#), [D1016](#), [D3799](#), [D4493](#), and [D6269](#).

1.2 This test method is applicable to relatively pure compounds only. Solidification point depression is dependent on impurity concentrations.

1.3 The following applies to all specified limits in this test method: for purposes of determining conformance with applicable specifications using this test method, an observed value or a calculated value shall be rounded off “to the nearest unit” in the last right hand digit used in expressing the specification limit, in accordance with the “rounding-off method” of Practice [E29](#).

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this 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.* For a specific hazard statement, see Section 8, Hazards.

2. Referenced Documents

2.1 ASTM Standards:²

[D852](#) Test Method for Solidification Point of Benzene

¹ This test method is under the jurisdiction of ASTM Committee [D16](#) on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee [D16.04](#) on Instrumental Analysis.

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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.

[D1015](#) Test Method for Freezing Points of High-Purity Hydrocarbons

[D1016](#) Test Method for Purity of Hydrocarbons from Freezing Points

[D3437](#) Practice for Sampling and Handling Liquid Cyclic Products

[D3438](#) Practice for Sampling and Handling Naphthalene, Maleic Anhydride, and Phthalic Anhydride

[D3799](#) Test Method for Purity of Styrene by Freezing Point Method (Withdrawn 2000)³

[D3852](#) Practice for Sampling and Handling Phenol, Cresols, and Cresylic Acid

[D4297](#) Practice for Sampling and Handling Bisphenol A (4,4'-Isopropylidenediphenol)

[D4493](#) Test Method for Solidification Point of Bisphenol A (4,4'-Isopropylidenediphenol)

[D6269](#) Test Method for Solidification Point of *p*-Xylene (Withdrawn 2004)³

[D6809](#) Guide for Quality Control and Quality Assurance Procedures for Aromatic Hydrocarbons and Related Materials

[E29](#) Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

2.2 Other Documents:

[OSHA Regulations](#), 29 CFR paragraphs 1910.1000 and 1910.1200⁴

3. Terminology

3.1 Definitions:

3.1.1 *solidification point, n*—an empirical constant defined as the temperature at which the liquid phase of a substance is in approximate equilibrium with a relatively small portion of the solid phase.

3.1.1.1 *Discussion*—Solidification point as distinguished from freezing point is described in Test Method [D1015](#). An interpretation of mole percent in terms of freezing point is given in Test Method [D1016](#).

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.

*A Summary of Changes section appears at the end of this standard