



Designation: F1460/F1460M – 18 (Reapproved 2022)

Standard Practice for Calibrating Oil Spill Dispersant Application Equipment Boom and Nozzle Systems¹

This standard is issued under the fixed designation F1460/F1460M; 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 uniform procedures for determining and reporting the dosage rate of oil spill dispersant application equipment.

1.2 This practice is applicable to spray systems employing booms and nozzles and is not fully applicable to other systems such as fire monitors, sonic distributors, or fan-spray guns.

1.3 This practice is applicable to systems for use on ships, boats, helicopters, or airplanes.

1.4 This practice is one of four related to dispersant application systems using booms and nozzles. One is on design, one on calibration, one on deposition, and one on the use of the systems. Familiarity with all four standards is recommended.

1.5 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.6 *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.*

1.7 *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.*

¹ This practice is under the jurisdiction of ASTM Committee F20 on Hazardous Substances and Oil Spill Response and is the direct responsibility of Subcommittee F20.13 on Treatment.

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2. Referenced Documents

2.1 *ASTM Standards*:²

F1413 Guide for Oil Spill Dispersant Application Equipment: Boom and Nozzle Systems

3. Significance and Use

3.1 This practice will enable calibration of oil spill dispersant application equipment and ensure a desired dosage and uniformity across the swath width.

3.2 The data provided by the methods described herein will permit the preparation of a chart relating delivery rate with application vehicle speed, flow meter reading or pump setting so that in actual application, the desired dosage will be achieved.

3.3 This practice will ensure that a dispersant application system is functional, capable of delivering a specified dosage, and that major components are operational. This will also ensure that the unit is functioning according to design specifications as detailed in Guide F1413.

4. Apparatus and Materials

4.1 *Pails*—of capacity 7 to 20 L [2 to 5 U.S. gal] to catch the spray from the nozzles.

4.2 *Graduated Cylinder*—of capacity 7 to 20 L [2 to 5 U.S. gal] or a scale having capacity of at least 20 kg [45 lbs] to determine the amount of fluid in each pail. Commercial equipment with an accuracy of at least 1 % is adequate.

4.3 *Stopwatch*.

4.4 *Test Fluid*—Water can be used as a test fluid if the viscosity of the dispersant to be used is not dissimilar to the viscosity of water. A test fluid should be used if the viscosity difference is greater than approximately 100 times that of

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.