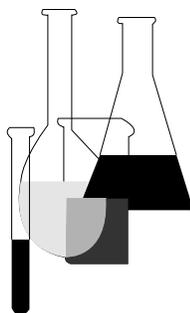




Product Properties Test Guidelines

OPPTS 830.6315 Flammability



INTRODUCTION

This guideline is one of a series of test guidelines that have been developed by the Office of Prevention, Pesticides and Toxic Substances, United States Environmental Protection Agency for use in the testing of pesticides and toxic substances, and the development of test data that must be submitted to the Agency for review under Federal regulations.

The Office of Prevention, Pesticides and Toxic Substances (OPPTS) has developed this guideline through a process of harmonization that blended the testing guidance and requirements that existed in the Office of Pollution Prevention and Toxics (OPPT) and appeared in Title 40, Chapter I, Subchapter R of the Code of Federal Regulations (CFR), the Office of Pesticide Programs (OPP) which appeared in publications of the National Technical Information Service (NTIS) and the guidelines published by the Organization for Economic Cooperation and Development (OECD).

The purpose of harmonizing these guidelines into a single set of OPPTS guidelines is to minimize variations among the testing procedures that must be performed to meet the data requirements of the U. S. Environmental Protection Agency under the Toxic Substances Control Act (15 U.S.C. 2601) and the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. 136, *et seq.*).

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OPPTS 830.6315 Flammability.

(a) **Scope—(1) Applicability.** This guideline is intended to meet testing requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136, *et seq.*).

(2) **Background.** The source material used in developing this harmonized OPPTS test guideline is OPP guideline 63–15 Flammability (Pesticide Assessment Guidelines, Subdivision D: Product Chemistry, EPA Report 540/9–82–018, October 1982) and 40 CFR 158.190 Physical and chemical characteristics.

(b) **Test methods—(1) Objective.** (i) Data on the physical and chemical characteristics of pesticide products are used to confirm or provide supportive information on their identity. Such data are also used in reviewing the production or formulating process used to produce the pesticide or product.

(ii) This test is used to characterize the flammability of liquids and gases for purposes of safety.

(2) **Test details—(i) Liquids.** The flash point shall be determined for combustible liquid products by any procedure consistent with paragraph (d) of this guideline or which is acceptable to any other Federal agency that requires this determination. The following table 1 summarizes the applicability and equipment requirements for the four commonly used methods.

Table 1—Comparison of Flash Point Test Methods

Method	Test Material	Equipment
Tag Closed Tester	Liquids with viscosity < 9.5 cSt at 25 °C and flash point below 93 °C.	Laboratory fabrication
Setaflash Closed Tester	Paints, enamels, lacquers, and related products having flash points between 0–100 °C and viscosity 150 st at 25 °C.	Available from manufacturer
Pensky-Martens Closed Tester	Fuel oils, lube oils, suspensions of solids, liquids that form a surface film, and other liquids.	Laboratory fabrication
CIPAC MT 12 (Abel Methods)	Petroleum products and mixtures (liquid, viscous, or solid), viscous products.	Laboratory fabrication

(ii) **Aerosols.** The flash point method is inadequate for determining the flammability of aerosols. Flame extension or flame projection of aerosol products shall be determined by the “Standard Method of Test for Flammability of Aerosol Products, ASTM D-3065” (see paragraph (d)(1) of this guideline).

(iii) **Alternative method.** If an alternative method is used, it is recommended that the registrant consult with the Agency prior to adopting the test method.

(c) **Reporting.** (1) The flash point shall be reported in degrees Celsius.

(2) The flame extension or flame projection shall be reported to the nearest centimeter.

(3) Any methods used to characterize the physical properties of a pesticide shall be referenced or described in the application for registration. If the methods used are listed in paragraph (d) of this guideline, reference to the method will suffice. If other methods are used, copies of such methods must be submitted with the application.

(4) References that denote “ASTM” refer to standardized methods published by the American Society for Testing and Materials, Philadelphia, PA. References denoting “CIPAC” refer to standardized methods of the Collaborative International Pesticide Analytical Council, Ltd., Hatching Green, Harpenden, Hertfordshire, England.

(5) The applicant shall submit his own statistical evaluation of the precision and accuracy of these measurements (e.g., standard deviations or confidence intervals) when appropriate.

(d) **References.** The following references should be consulted for additional background material on this test guideline.

(1) American Society for Testing and Materials, “Standard Test Methods for Flammability of Aerosol Products,” D-3065, ASTM, Philadelphia, PA, 1994 annual index.

(2) American Society for Testing and Materials, “Flash Point by Tag Closed Tester,” D-56, ASTM, Philadelphia, PA, 1994 annual index.

(3) American Society for Testing and Materials, “Flash Point by Pensky-Martens Closed Tester,” D-93, ASTM, Philadelphia, PA, 1994 annual index.

(4) American Society for Testing and Materials, “Flash Point of Liquids by Setaflash Closed-cup Apparatus,” D-3278, ASTM, Philadelphia, PA, 1994 annual index.

(5) *Collaborative International Pesticide Analytical Council (CIPAC) Handbook*, “MT 12 Flash Point,” CIPAC, Hatching Green, Harpenden, Hertfordshire, England (1970).

(6) *Official Journal of the European Communities*, “A.10. Flammability (Solids),” No L 383 A/76.

(7) *Official Journal of the European Communities*, “A.11. Flammability (Gases),” No L 383 A/79.

(8) *Official Journal of the European Communities*, “A.12. Flammability (Contact With Water),” No L 383 A/81.