



Designation: E2252 – 22

Standard Practice for Selection of Lead Hazard Reduction Methods for Identified Risks in Residential Housing or Child Occupied Facilities¹

This standard is issued under the fixed designation E2252; 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 describes the selection of lead hazard reduction methods for controlling lead hazard risks identified during risk assessments of residential dwellings and child occupied facilities.

1.2 The values stated in SI units are to be regarded as standard. The values given in parentheses are mathematical conversions to inch-pound units that are provided for information only and are not considered standard.

1.3 This practice contains notes, which are explanatory and are not part of the mandatory requirements of this standard.

1.4 *Methods described in this practice may not meet or be allowed by requirements or regulations established by local authorities having jurisdiction. It is the responsibility of the user of this standard to comply with all such requirements and regulations.*

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *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

D1356 Terminology Relating to Sampling and Analysis of Atmospheres

¹ This practice is under the jurisdiction of ASTM Committee D22 on Air Quality and is the direct responsibility of Subcommittee D22.12 on Sampling and Analysis of Lead for Exposure and Risk Assessment.

Current edition approved March 1, 2022. Published June 2022. Originally approved in 2002. Last previous edition approved in 2018 as E2252 – 18. DOI: 10.1520/E2252-22.

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.

E917 Practice for Measuring Life-Cycle Costs of Buildings and Building Systems

E1605 Terminology Relating to Lead in Buildings

E1795 Specification for Non-Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings

E1796 Guide for Selection and Use of Liquid Coating Encapsulation Products for Leaded Paint in Buildings

E1797 Specification for Reinforced Liquid Coating Encapsulation Products for Leaded Paint in Buildings

E2052 Guide for Evaluation, Management, and Control of Lead Hazards in Facilities (Withdrawn 2008)³

E2115 Guide for Conducting Lead Hazard Assessments of Dwellings and of Other Child-Occupied Facilities

E2239 Practice for Record Keeping and Record Preservation for Lead Hazard Activities

2.2 HUD Documents:⁴

HUD Guidelines Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

24 CFR Part 35 Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Property, and Housing Receiving Federal Assistance; Final Rule, September 15, 1999

2.3 EPA Documents:⁵

Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools

40 CFR Part 745 Subpart L, Lead-Based Paint Activities

2.4 NIBS Document:⁶

NIBS Guidelines Lead-Based Paint: Operations and Maintenance Work Practices Manual for Homes and Buildings

2.5 RSMeans Document:⁷

Building Construction Cost Data

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

⁴ Available from U.S. Department of Housing and Urban Development (HUD), 451 7th Street S.W., Washington, DC 20410, <http://www.hud.gov>.

⁵ Available from United States Environmental Protection Agency (EPA), William Jefferson Clinton Bldg., Federal Triangle Complex, 1200 Pennsylvania Ave., NW, Washington, DC 20004, <http://www.epa.gov/lead>.

⁶ Available from National Institute of Building Sciences (NIBS), 1090 Vermont Avenue, NW, Suite 700, Washington, DC 20005, <http://www.nibs.org>.

⁷ Available from RSMeans data from Gordian, 1099 Hingham St., Ste. 201, Rockland, MA 02370, <http://www.rsmeans.com>.

3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminologies D1356 and E1605.

4. Significance and Use

4.1 This practice outlines lead hazard reduction methods that have been shown to be effective in preventing lead poisoning in children.

4.2 This practice tabulates advantages, disadvantages, and relative costs of the reduction methods to assist professionals such as certified lead-based paint risk assessors, supervisors, or project designers in selecting appropriate cost-effective options for controlling lead hazards identified during a lead risk assessment. Different control methods may be equally effective in controlling a given lead hazard and, consequently, the selection of a specific control method may depend on the needs and economic constraints of the client or building owner.

4.3 This practice is intended to complement other lead hazard activities that are performed in accordance with regulations promulgated by authorities having jurisdiction. For example, in some jurisdictions, a lead hazard risk assessment, by regulation, consists of a visual assessment, a hazard assessment including environmental monitoring for lead, and selection of lead hazard reduction methods.

4.4 This practice is intended to assist homeowners, owners and occupants of rental property, lenders, insurers, and others who have interest in selecting options for controlling lead hazards associated with leaded paint, dust, or soil.

4.5 This practice complements Guide E2115. Information and data gathered in accordance with Guide E2115 and this practice are used in preparing a risk assessment report. Subsequent lead hazards are mitigated through implementation of controls selected in accordance with this present practice.

4.6 This practice addresses the most commonly used lead hazard reduction methods. It is left to users of this practice to identify the advantages, disadvantages, and relative costs associated with emerging control technologies for comparison with these characteristics of established lead hazard control methods.

4.7 This practice does not address specific historic preservation requirements. The interim control and abatement methods in this practice will work in any structure; however, historic preservation regulations promulgated by authorities having jurisdiction may impose specific interim control or abatement methods.

5. Training and Experience Requirements

5.1 Selection of appropriate lead hazard reduction methods performed in response to risk assessments shall be carried out by certified or licensed risk assessors, supervisors, workers, or project designers as required under regulations promulgated by authorities having jurisdiction. Users of lead hazard control services should review the credentials and experience of all involved to regulations promulgated by authorities having jurisdiction to determine whether each is qualified to conduct the work.

5.1.1 Refer to Guide E2052 and to regulations promulgated by authorities having jurisdiction (see Appendix X1) regarding training and experience of risk assessors, supervisors and project designers.

5.2 The selection of lead hazard reduction methods shall take into consideration the qualifications and experience of persons such as contractors or in-house maintenance personnel who will implement the selected procedures. These persons should be trained regarding the hazards of lead and the proper use of lead hazard reduction methods as required through certification or licensure promulgated by authorities having jurisdiction.

5.2.1 Refer to Guide E2052 and to regulations promulgated by authorities having jurisdiction (see Appendix X1) for additional information regarding training and experience for workers and supervisors, and for information regarding work practice standards and interim controls.

6. Lead Hazard Reduction Methods

6.1 *General*—There are two approaches to reducing lead hazards: interim control and abatement. Most often, a combination of the two approaches will be utilized to maximize the effectiveness of hazard management balanced with the cost to be incurred.

6.2 *Occupant and Owner Education*—All lead hazard reduction strategies shall include a component on occupant and owner education of lead hazards. In addition, the individual responsible for the lead hazard reduction shall inform owners that, when a property has been identified as containing lead hazards or lead-based paint, they shall disclose this information upon the sale, lease, or rental of the property.

NOTE 1—A document considered to be universally informative for occupant and owner education is the EPA/HUD/CPSC pamphlet entitled *Renovate Right: Important Lead Hazard Information for Families, Child Care Providers, and Schools*.

6.2.1 Refer to Guide E2052 for elements of an occupant education program.

7. Interim Controls

7.1 Interim controls are designed to reduce the exposure to lead through procedures that require ongoing maintenance. They are almost always an option in every lead hazard reduction situation; however, if interim controls cannot control a lead hazard, abatement (see Section 8) will be the only option. The main question that the owner needs to answer is: Are resources, staff, equipment, priority and schedule adherence, budget, and willingness to manage an interim lead hazard control program available over the long term?

7.2 The following are key elements of interim controls:

NOTE 2—Refer to Guide E2052 for developing interim controls.

7.2.1 Educate occupants and owners regarding lead hazards (see 6.2).

7.2.2 Train maintenance personnel concerning the proper maintenance, cleaning, and surface protection requirements to maintain a safe lead-hazard-free environment (see 5.2).

7.2.3 Conduct periodic visual inspections of coated surfaces by qualified personnel to assess paint integrity.