

CHAPTER 7025
MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY DIVISION
PAINT REMOVAL

**ABRASIVE BLASTING OF LEAD PAINT FROM
RESIDENTIAL, CHILD CARE, AND SCHOOL
BUILDINGS**

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**ABRASIVE BLASTING OF LEAD PAINT FROM RESIDENTIAL,
CHILD CARE, AND SCHOOL BUILDINGS**

7025.0010 APPLICABILITY.

Parts 7025.0010 to 7025.0080 establish the procedures that a contractor shall follow to test for the presence of lead paint prior to abrasive blasting and to remove lead paint by abrasive blasting of the exterior of any residential building, child care building, school building, or any building within 100 feet of a residential, child care, or school building, or a playground.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0020 DEFINITIONS.

Subpart 1. **Scope.** For the purposes of parts 7025.0010 to 7025.0080, the terms in subparts 2 to 15 have the meanings given them.

Subp. 2. **Abrasive blasting.** "Abrasive blasting" means the use of air pressure and an abrasive grit to remove surface coatings. Among the techniques specifically identified as abrasive blasting are dry abrasive blasting, wet abrasive blasting, modified-wet abrasive blasting and vacuum blasting.

Subp. 3. **Acid extraction.** "Acid extraction" means laboratory analysis of lead concentration according to Method 3050 as described in "Test Methods for Evaluating Solid Waste Volume 1A: Laboratory Manual Physical/Chemical Methods" SW-846, United States Environmental Protection Agency, Third Edition, November 1986. This document is incorporated by reference and is available through the Minitex interlibrary loan system. This document is not subject to frequent change.

Subp. 4. **Child care building.** "Child care building" means a building that incorporates a place where children are cared for or supervised at any time of the day or year.

Subp. 5. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency.

Subp. 6. **Contractor.** "Contractor" means a person or an organization who, for financial gain, directly performs or, through subcontracting or similar delegation, causes abrasive blasting to be performed.

Subp. 7. **Lead paint.** "Lead paint" means a coating that:

A. contains one-half of one percent (0.5 percent) total lead or more, as determined by the analytical methods of acid extraction or by X-ray fluorescence laboratory analyzer;

B. contains one milligram per square centimeter (1.0 mg/cm²) of lead or more, as determined by an X-ray fluorescence hand-held analyzer; or

C. causes a positive reaction when combined with sodium sulfide (Na₂S).

Subp. 8. **Modified-wet abrasive blasting.** "Modified-wet abrasive blasting" means abrasive blasting with the addition of a minimum quantity of water to the air abrasive stream such that dispersal of particulate matter is suppressed with little or no adherence of waste material to the substrate.

Subp. 9. **Playground.** "Playground" means an area designated for children's play including a school building playground, a child care building playground, a play area of a public park, or an area that contains permanent play equipment.

Subp. 10. **Residential building.** "Residential building" means a single family or multi-unit structure that is used or intended for use as human habitation, including every other structure located within the same lot.

Subp. 11. **School building.** "School building" means a building that contains a public school as defined in Minnesota Statutes, section 120.05, or a nonpublic school, church, or religious organization, or home-school in which a child is provided instruction in compliance with Minnesota Statutes, sections 120.101 and 120.102.

Subp. 12. **Sodium sulfide.** "Sodium sulfide" means a six to eight percent solution of sodium sulfide (Na_2S) compound in water that reacts with lead at concentrations greater than 1.0 percent (10,000 ppm).

Subp. 13. **Total lead.** "Total lead" means the concentration of lead in paint, determined by acid extraction or by X-ray fluorescence laboratory analyzer, expressed in units of parts per million (ppm) or percent (%).

Subp. 14. **Vacuum blasting.** "Vacuum blasting" means dry abrasive blasting with a blast nozzle that is surrounded by a chamber under negative air pressure that is held against the coated surface.

Subp. 15. **X-ray fluorescence analyzer.** "X-ray fluorescence analyzer" or "XRF analyzer" means:

A. a hand-held portable instrument that measures lead concentration (by fluorescence of lead atoms) by gamma radiation, expressed in milligrams per centimeter square (mg/cm^2); or

B. a desktop laboratory instrument that measures lead concentration (by fluorescence of lead atoms) by gamma radiation, expressed in parts per million (ppm).

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0030 TESTING.

Subpart 1. **Testing required.** A contractor shall test a coating for lead concentration, using the methods required by this part, before using abrasive blasting to remove a coating from the exterior of a residential, child care, or school building, or any building within 100 feet of a residential, child care, or school building, or a playground.

Subp. 2. **Paint samples.** The contractor shall test all layers of paint on the following exterior surfaces from which paint is to be removed:

A. the paint on the original structure;

B. the paint on any addition to the original structure;

C. the paint on each separate structure; and

D. if surfaces have been painted or repainted at different times or with different paints, the paint on each surface.

Subp. 3. **Analysis.** The contractor shall analyze each paint sample for lead concentration using one of the methods in items A to D.

A. **Acid extraction.** If the contractor tests by acid extraction, the contractor shall analyze for total lead using paint samples that contain equal surface areas of all the paint coatings of the surface that is tested.

B. **X-ray fluorescence analyzer.** If the contractor tests using a hand-held portable XRF analyzer, the lead concentration for each surface shall be the mean value of at least five separate measurements for that surface. If the contractor tests using a desktop laboratory XRF analyzer, each paint sample shall contain equal surface areas of all paint coatings of the surface that is tested.

C. **Sodium sulfide (Na_2S).** If the contractor tests using sodium sulfide and obtains a negative test result for lead on any surface painted before 1978, the contractor shall confirm the absence of lead paint by testing a sample from that surface with either acid extraction or an XRF analyzer in the manner required in item A or B.

D. Other analysis methods. The contractor may test for lead concentration using an analysis method not listed in items A to C only if the commissioner approves the analysis method in writing prior to its use. The commissioner shall approve an analysis method if the commissioner finds that the precision and accuracy of the method is comparable to the methods in item A or B.

Subp. 4. **Test results.** The contractor shall provide the test results to the building owner or administrator and the adult residents as part of the notice described in part 7025.0040, subpart 2, to the commissioner as part of the notice described in part 7025.0040, subpart 3, and shall retain the test results for a period not less than five years from the date of the test.

Subp. 5. **Waiver of testing.** A contractor may elect to conduct abrasive blasting of a residential, child care, or school building, or of any building within 100 feet of a residential, child care, or school building, or a playground, without testing to determine the presence and concentration of lead in paint if the contractor treats the paint as lead paint, so states in the notice of part 7025.0040, and otherwise complies with parts 7025.0010 to 7025.0080.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0040 NOTIFICATION.

Subpart 1. **Notice required.** At least five days before the start of abrasive blasting of lead paint on the exterior of a residential, child care, or school building, or of any building within 100 feet of a residential, child care, or school building, or a playground, the contractor shall provide notice as described in items A and B.

A. Written notice as required in subpart 2 must be given to the owner or administrator and the adult residents of the building to be abrasive blasted, and to the owner or administrator and the adult residents of any residential, child care, or school buildings within 50 feet of the building to be abrasive blasted. The contractor must mail or physically hand the notice to the owner or administrator of a child care or school building. For residences, the contractor must mail, physically hand, or put on or under the door of each residence a notice for at least one adult resident of each single-family structure and one adult resident of each unit in a multifamily structure.

B. Written notice as required in subpart 3 must be given to the commissioner.

If the contractor postpones abrasive blasting more than five days from the anticipated start of abrasive blasting stated in the written notices required by this subpart, then the contractor shall, at least two days before the start of abrasive blasting, revise and redistribute the notices required by this subpart with the new days and hours during which abrasive blasting is anticipated.

Subp. 2. **Contents of notice to residents, administrator, and owner.** The notice required in subpart 1, item A, shall state that lead paint is present on the structure, shall provide the results of the test required by part 7025.0030 and the methods of analysis used, shall specify the days and the hours during which abrasive blasting is anticipated, and shall advise the owner or administrator and the adult residents to take the following actions before abrasive blasting begins:

A. close all doors, windows, and storm windows on the walls to be abrasive blasted and their adjoining walls, and on the walls of neighboring buildings that face the structure to be abrasive blasted and their adjoining walls;

B. completely seal from the outside with adhesive tape or caulking the outermost window or storm window to the window frame, the outermost door or storm door to the door frame, and air intake openings on the walls of the neighboring building that are specified in item A. Walls that adjoin the walls facing the abrasive blasting need only be sealed to a distance of 50 feet from the wall to be abrasive blasted;

C. turn off all air conditioning units on the walls to be abrasive blasted and their adjoining walls, and on the walls of neighboring buildings that face the structure to be abrasive blasted and their adjoining walls, and tightly cover all of these units with impermeable material; and

D. take inside or remove from the property within 50 feet of the structure to be abrasive blasted all children's toys and play equipment, or cover equipment that cannot be moved, and all pets, pet houses, and pet food and water bowls.

Subp. 3. Contents of notice to commissioner. The notice required in subpart 1, item B, shall state:

- A. the address and location of the building to be abrasive blasted;
- B. the scheduled starting and completion days and times;
- C. the results of the test required by part 7025.0030 and the method of analysis used;
- D. the name, business address, and telephone number of the contractor;
- E. a description of the building or buildings to be abrasive blasted, including whether each building is a residential, child care, or school building, or within 100 feet of a residential, child care, or school building, or a playground;
- F. a copy of the notice given to the owner or administrator and adult residents of each building under subparts 1 and 2;
- G. the abrasive blasting method the contractor plans to use;
- H. the procedures the contractor plans to use to comply with parts 7025.0010 to 7025.0080;
- I. the name and location of the waste disposal site where the debris collected as required by part 7025.0060 will be deposited; and
- J. any other information that the commissioner deems necessary to determine that the requirements of parts 7025.0010 to 7025.0080 will be followed.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0050 CONTAINMENT.

Subpart 1. Containment required. The contractor shall apply containment, using the methods required by this part, before using abrasive blasting to remove lead paint from the exterior of a residential, child care, or school building, or a building within 100 feet of a residential, child care, or school building, or a playground. The contractor may utilize methods of removal by abrasive blasting or of containment other than those specified in this part only if the commissioner approves the alternative method of removal or containment in writing prior to its use. The commissioner shall approve the alternative method of removal or containment if the contractor demonstrates that the alternative containment method will prevent contamination of soil and house dust at least as well as the methods specified in this part.

Subp. 2. Sealing the residential, child care, or school building. Before abrasive blasting begins, the contractor shall:

- A. fully close and completely seal from the outside with adhesive tape or caulking the outermost window or storm window to the window frame, the outermost door or storm door to the door frame, and air intake openings on the wall to be abrasive blasted and on the two adjoining walls to a distance of 50 feet from the wall to be abrasive blasted, if the building is a residential, child care, or school building;
- B. tightly cover and seal with impervious plastic all air conditioning units and other air intake openings on the walls listed in item A; and
- C. if a wall of a neighboring residential, child care, or school building is less than 20 feet from a wall to be abrasive blasted, suspend curtains between the wall to be abrasive blasted and the neighboring building that:
 - (1) are parallel to the wall being abrasive blasted;
 - (2) extend vertically from the ground to the height of the wall to be abrasive blasted or, if the curtains are located on the neighboring building, extend vertically from the ground to the height of the wall of the neighboring building which faces the wall to be abrasive blasted;
 - (3) extend horizontally for the width of the wall to be abrasive blasted or, if the curtains are located on the neighboring building, extend horizontally for the width of the wall on the neighboring building which faces the wall to be abrasive blasted; and
 - (4) overlap at each seam a distance of at least 1-1/2 feet.

The contractor shall not conduct abrasive blasting if any windows or doors are open on any wall that faces the wall to be abrasive blasted, and on the adjoining walls to a distance of

50 feet from the wall to be abrasive blasted, of a neighboring residential, child care, or school building that is within a distance from a wall to be abrasive blasted that is less than or equal to the distance of ground cover required by subpart 3.

Subp. 3. Ground cover. Before abrasive blasting begins, the contractor shall completely cover, with impermeable tarpaulins, the ground beneath the wall or structure to be abrasive blasted by:

- A. laying the tarpaulins as close as possible to the building foundation;
- B. overlapping the tarpaulin edges by a distance not less than 1-1/2 feet;
- C. anchoring the tarpaulins at the foundation and along the overlapping edges to prevent separation; and
- D. covering the ground with tarpaulins for a distance of at least 25 feet in all directions from the area of blasting. For each story above the first, the contractor shall increase this distance by ten feet.

Subp. 4. Additional containment required. If visible emissions of particulate matter occur in the air or visible deposits occur on the ground at a distance from the structure greater than the distance of the ground cover, then the contractor shall immediately cease abrasive blasting until the contractor:

- A. adds additional ground cover, in the manner required in subpart 3, to a distance greater than the distance of visible particle transport or deposition;
- B. uses a curtain or curtains that prevent the dispersal of visible particles to a distance beyond the ground cover; or
- C. uses modified-wet abrasive blasting or vacuum blasting, instead of open dry abrasive blasting, to remove the lead paint.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0060 CLEANUP.

Subpart 1. Cleanup. At the end of each workday, the contractor shall recover and remove all blasting debris including used abrasive; wood, brick, or stucco dust; and paint particles from:

- A. the roof and the roof gutters of the building that was abrasive blasted, while ground covers remain in place;
- B. the ground covers in such a way as to not deposit any blasting debris on the ground; and
- C. all soil, grass, walkways, porches, patios, steps, outside window wells and door wells, shrub and flower beds, and any other places surrounding the building that was abrasive blasted and any neighboring buildings, so that no visible deposits remain.

Subp. 2. Cleanup methods. The contractor may remove the blasting debris by manual means or by vacuum, but shall not use an air pressure stream or a water stream which redistributes, but does not remove, the blasting debris. The contractor may use air pressure to remove particles from exterior walls, but only if ground covers are in place as required by part 7025.0050, subpart 3, and only before the adhesive tape or caulking seals and the curtains required by part 7025.0050, subpart 2, are removed.

Subp. 3. Removal and transportation. The contractor shall remove and transport all blasting debris from the property in such a way as to prevent any deposition of blasting debris on the property, the right-of-way, the walkway, or the roadway.

Subp. 4. Disposal. The contractor shall dispose of the blasting debris as required by either chapter 7035 or 7045, whichever applies.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0070 RESTRICTIONS.

Subpart 1. Wet abrasive blasting. A contractor shall not use wet abrasive blasting to remove lead paint, but may use modified-wet abrasive blasting to remove lead paint if the contractor complies with parts 7025.0010 to 7025.0080.

Subp. 2. **Reuse of abrasive.** A contractor shall not reuse or recycle abrasive for abrasive blasting of lead paint unless the abrasive is cleaned prior to reuse by a dust collector that removes the lead paint particles or unless the abrasive is used only for vacuum blasting conducted as required in part 7025.0080.

Subp. 3. **Access of children.** The contractor shall make a reasonable effort to prevent children under the age of ten years from entering the area within 50 feet of abrasive blasting while it is occurring and until cleanup as required by part 7025.0060 is completed. If a child under the age of ten years comes within 50 feet of abrasive blasting while it is occurring, abrasive blasting shall immediately cease until the child leaves or is removed from the area.

Subp. 4. **Identification of contractor.** The contractor shall post its name and telephone number in letters and numbers at least four inches high on a vehicle at the property or on a sign posted on the property from the commencement of abrasive blasting until completion of the contractor's work at the building.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*

7025.0080 VACUUM BLASTING.

Subpart 1. **Certain contractors exempt from requirements.** A contractor that uses vacuum blasting to remove lead paint from all parts of a structure is exempt for that structure only from the requirements of subpart 2 if:

A. the contractor removes all paint by holding the workhead of the vacuum blasting unit at all times against the substrate;

B. all parts of the vacuum blasting equipment are in a condition that prevents emissions of particulate matter; and

C. no other method of abrasive blasting is used.

Subp. 2. **Inapplicable requirements.** Contractors described in subpart 1 are exempt from the following requirements:

A. part 7025.0040, subparts 1 and 2, to the extent that they require the contractor to notify the owner or administrator and adult residents of neighboring buildings;

B. part 7025.0050, subpart 4; and

C. part 7025.0050, subpart 2, item C.

For contractors described in subpart 1, the requirement of part 7025.0050, subpart 3, item D, of distance of ground cover is reduced to a minimum of 15 feet in all directions of the point of blasting and need not be increased according to the height of the structure.

Statutory Authority: *MS s 116.07; 144.878*

History: *16 SR 442; 18 SR 614*