

Concrete Recycling and Disposal Fact Sheet

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What is the purpose of this fact sheet?

This fact sheet is intended to help property owners, renovation and demolition contractors and used concrete handlers determine what painted concrete can be recycled or how it must be disposed of. “Clean” concrete is exempt by rule from most regulations. With certain location limitations, clean concrete may be crushed and used as fill, aggregate in road beds or concrete to concrete recycling. Most painted concrete can be used for these purposes in accordance with rule exemptions. This fact sheet explains when painted concrete is considered clean and is exempt for use vs. when painted concrete is not considered clean and where a specific approval is required by the Department of Natural Resources.

On what basis is painted concrete considered clean vs. not clean?

Painted concrete is considered to be clean if the concrete has not been coated with lead-bearing paint. “Lead-bearing paint” is defined by s. 254.11(8), Wis. Stats., to mean:

Any paint or other surface coating material containing more than 0.06 percent lead by weight, calculated as lead metal, in the total nonvolatile content of liquid paint, more than 0.5 percent lead by weight in the dried film of applied paint, or more than 1 milligram of lead per square centimeter in the dried film of applied paint.

Note: Latex-based paint does not contain lead and, therefore, concrete coated only with latex-based paint is considered clean.

Who is responsible to determine what type of paint is on the concrete and whether it is lead-bearing?

The generator or owner of the painted concrete has the responsibility to determine if the paint on the

concrete is latex or oil-based and if it has been coated with lead-bearing paint. The responsible individuals include:

- The property owner
- Individuals carrying out a renovation or demolition project
- Individuals that later take ownership or control of painted concrete materials for recycling or disposal

So, tell me again, exactly what painted concrete should have the paint tested for lead?

Paint on concrete should be tested for lead if the paint is not latex-based and both of the following are true:

1. The painted concrete will be processed and/or used under a rule exemption for fill, aggregate or concrete to concrete recycling, and
2. The structure was built before 1978.

These criteria apply to painted concrete from all structures, whether used for residential, farm, commercial, industrial or other purposes. Information below explains how to sample and test paint for lead to determine if the painted concrete is clean for exempt use.

Paint other than latex-based paint manufactured before 1978 may contain lead at concentrations that define lead-bearing paint and the paint must be tested for lead to determine if the painted concrete is clean for exempt use. Because an owner of a structure older than 25 years won't usually know if only latex paint was used over the entire life of the building, lead testing is normally needed for all pre-1978 structures.

Note: If the painted concrete is disposed of in a landfill approved by the DNR, the paint doesn't have to be tested.

What management options are available for concrete coated with paint that isn't lead-bearing?

Concrete coated with paint that is not lead-bearing paint may be used as fill, aggregate or concrete to concrete recycling in accordance with the following rule exemptions:

Reuse of clean concrete is exempt under s. NR 500.08(2)(a), Wis. Adm. Code. Certain environmental performance, location and operational requirements apply. Please review these requirements [s. NR 504.04(3)(c) and s. NR 504.04(4)] before placing used concrete on the land. For more information about this disposal exemption, refer to a separate frequently asked question, *What is defined as "clean fill" that does not have to be taken to a landfill?*, on the DNR website at

<http://dnr.wi.gov/topic/Waste/SolidFAQ.html>

Concrete coated with paint that is not lead-bearing may also be disposed of in a landfill.

What management options are available for concrete coated with lead-based paint?

Landfill disposal is an available management option for concrete coated with lead-based paint. The landfill must be either a construction and demolition landfill approved under ch. NR 503, or a municipal solid waste landfill approved under ch. NR 504.

If someone wishes to use ground concrete coated with lead-bearing paint for structural fill beneath an impermeable material such as a building foundation or a parking lot, they should fill out an Application for Low Hazard Waste Exemption for Reuse of Concrete Coated with Lead-bearing Paint

<http://dnr.wi.gov/files/pdf/forms/4400/4400-274.pdf>

and submit it to the local DNR office. If DNR reviews the application and is convinced the proposed use will not impact human health and the environment, they will grant a written exemption under s. 289.43(8), Wis. Stats. and s. NR 500.08(5)(a).

Who should I contact if I have questions about painted concrete recycling and disposal?

Questions about disposal of painted concrete should be directed to the DNR Waste and Materials Management Program. Find your local DNR solid waste contact at <http://dnr.wi.gov/topic/waste/>.

Is the paint sampling recommended by the DNR the same as what's required by the Department of Health Services?

No. The lead sampling and testing for paint on concrete for recycling and disposal purposes isn't subject to the same (more rigorous) DHS requirements that may apply to occupied structures, especially schools and residences.

If a structure will be used for residential purposes after the project is complete, DHS rules require sampling by a certified individual. Also, according to federal law, a seller (or landlord) of a home built before 1978 is required to provide information to a buyer (or renter) about whether the home contains lead-bearing paint or any lead poisoning hazards. For more information about this, visit

<https://www.dhs.wisconsin.gov/lead/homepurchase.htm>.

Who can sample and test paint samples from concrete for recycling and disposal purposes?

There is no specific requirement or certification required for an individual sampling paint from concrete for recycling and disposal purposes to determine if the painted concrete is clean for exempt use. An individual may take their own samples or a DHS certified individual may be hired to do the sampling. However, unless an XRF instrument is used by a qualified individual to determine lead concentrations on site, the paint samples must be sent to a certified laboratory for analysis.

Lists of certified lead-bearing paint inspectors, risk assessors and laboratories are available from DHS at <https://www.dhs.wisconsin.gov/lead/company-list.htm>. If you contact a DHS-certified individual but you only need to determine lead levels in paint on concrete to comply with recycling and disposal requirements, be sure to say this. The following summarizes sampling and testing options for lead-bearing paint for recycling and disposal purposes:

- Hire a Lead Inspector: A lead inspector may test paint using XRF (x-ray) instruments that "peer" through layers of paint to determine lead content immediately. A lead inspector can also collect samples for laboratory analysis. If immediate results are desired, be sure to inquire about on site testing with an x-ray instrument.
- Hire a Risk Assessor: A risk assessor will collect

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paint samples and send them to a laboratory for lead testing. Normally, a week or more may be needed for a laboratory to complete testing and additional time for a risk assessor to review results and get back to you. For time sensitive projects, it may be possible to obtain an “expedited” laboratory analysis and results interpretation, which may cost more, and may still require several days.

- **Self-Sampling:** For recycling and disposal purposes only, a DHS certified individual isn't required to do the sampling. Instead, an individual may take their own samples and send the samples to a certified laboratory for testing. One or two samples are unlikely to be enough since multiple layers of paint types may be present in different areas. Sampling recommendations for recycling and disposal purposes are listed below.

The U.S. Environmental Protection Agency hasn't approved and doesn't recommend do-it-yourself lead test kits that do not include laboratory analysis because they may not be sufficiently accurate to identify lead-bearing paint. For example, one lead test kit manufacturer claims their product can reliably detect lead levels down to only 0.5 percent lead, almost 10 times the level used to define “lead-bearing paint” in Wisconsin.

If I want to take my own samples of paint from concrete for recycling and disposal purposes, how many samples should I take?

Take at least one sample from each area of painted concrete, based on consideration of the different areas of a structure:

- Interior
- Exterior
- Foundation
- Upper walls
- Each room, or other area, where differences in coatings is visually apparent or seems likely

Each sample should be taken as a composite (mixture) of all paint layers at that location. Use a sharp knife to cut down to the concrete and a sharp scraper to release the paint from the concrete. (Thoroughly wash your hands after collecting paint samples.) Prior to collecting a sample, contact a certified laboratory to find out what cost is charged, how much paint sample is needed and what type of

sample container is recommended. Normally, a sealable plastic bag or clean and dry jar is suitable. *These sampling recommendations are not intended for assessment of lead hazard to occupants but are only for recycling and disposal purposes to determine if painted concrete is clean for exempt disposal.*

What are the concerns about disposal of concrete coated with lead-bearing paint and where can I get more information?

Paint that contains lead poses potential risks. In the environment, paint from concrete will chip and lead can leach from the paint over time where the painted concrete is disposed of. The lead could leach into groundwater or be carried to surface water by soil erosion. If the concrete is crushed, windblown dust carrying the lead is an additional concern. Further information is available from the following sources:

- Wisconsin Department of Health Services Lead homepage, <https://www.dhs.wisconsin.gov/lead/index.htm>
- National Lead Information Center, 800-424-5323 or <http://www.epa.gov/lead/pubs/nlic.htm>

For more information

DNR Waste & Materials Management Program, PO Box 7921
Madison, WI 53707
608-266-2111; DNRWasteMaterials@Wisconsin.gov

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