

Spray painting wastes: filters, gun cleaner, and thinner

Spray painting and coating operations generate wastes that may cause environmental harm if improperly managed, including exhaust filters, spray gun or wand cleaner, and used thinner. This fact sheet discusses the management requirements for these wastes overseen by the Minnesota Pollution Control Agency (MPCA) and the metropolitan counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties).

Guidance regarding disposal of aerosol spray paint and coating containers may instead be found in MPCA fact sheet #w-hw4-00, Waste aerosols and compressed gas cylinders, at:

<https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf>.

Exhaust filters

All spray painting and coating operators must take reasonable precautions to prevent overspray from being exhausted into the atmosphere. The most common methods of capturing overspray are dry filters and water wash systems. Water wash systems, also known as waterfalls, use a separator system or a filter to remove paint from the water.

Paint filters may be hazardous if heavy metals are found in the paint or coatings they capture, if F-listed hazardous waste solvents are sprayed into the filters during spray gun cleaning, or, rarely, due to a potential for some filters to self-combust and start a fire. **You must assume that your used filters are hazardous waste and manage them accordingly unless you evaluate and document them as non-hazardous.** Find more information regarding waste evaluation, including reference to the F-list, in MPCA fact sheet #w-hw1-01, Evaluate waste, at: <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

Heavy metals that would render a paint and contaminated filters toxic hazardous wastes include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Though use of these heavy metals has been significantly reduced, some industrial and specialty paints or coatings may still contain them. When evaluating your painting wastes, you may rely on an explicit statement by a manufacturer in a letter or a Safety Data Sheet (SDS) that a product is heavy metal-free. However, you may not rely on the absence of heavy metals being listed in the ingredients on a product label or in an SDS as evidence that the product is heavy metal-free.

Many spray gun and wand cleaners contain toxic F-listed solvents, such as methylene chloride, methyl ethyl ketone (MEK), and toluene. Spraying these solvents into an exhaust filter during gun cleaning will automatically make the filter an F-listed hazardous waste as well. Operators may avoid this by spraying gun cleaner into closable hazardous waste collection containers or by using gun-washing systems. Paints containing F-listed solvents as ingredients, or to which you add F-listed solvents to thin the paint for use, are not F-listed when discarded and do not cause filters to be F-listed. See MPCA fact sheet #w-hw2-00, F-list of hazardous wastes, at: <https://www.pca.state.mn.us/sites/default/files/w-hw2-00.pdf>

Though rare, some paint filter and paint or solvent combinations may create a risk of the filters self-combusting when discarded and causing a fire in other waste. Paint wastes that self-combust may be ignitable solid hazardous wastes. The MPCA recommends that operators carefully review paint specifications and filter manufacturer recommendations to avoid situations where paint filters may self-combust or ignite fires.

Some synthetic dry filters are designed to be dissolved into waste solvent when discarded. You may treat your hazardous waste filters using this method as long as you close the solvent container during the process. However, this method may result in a thick or sludge-like waste mixture that may be difficult or expensive to dispose of. Check with your solvent disposal vendor to ensure they will accept the resulting mixture before you dispose of your filters using this method.

Spray gun cleaner

Many spray gun and wand cleaners contain toxic F-listed solvents, including methylene chloride, MEK, and toluene. Even if not F-listed, most gun cleaners have low enough flashpoints to be ignitable hazardous wastes when discarded. Assume that your waste gun cleaner is hazardous waste and manage it accordingly unless you evaluate and document it as non-hazardous. See MPCA fact sheet

#w-hw1-01, Evaluate waste, at: <https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf>.

Collect hazardous gun cleaner in closable, labeled hazardous waste containers. Keep the containers closed except when actually adding to or emptying waste from them. See MPCA fact sheet #w-hw1-05, Accumulate hazardous waste, at: <https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf>.

Thinner

Most thinners used in spray painting operations are ignitable hazardous wastes when discarded. Many are also F-listed when discarded after being used for cleaning or surface preparation. As discussed previously, paints containing F-listed solvents as ingredients, or to which you add F-listed solvents to thin the paint for use, are not F-listed when discarded. See MPCA fact sheet #w-hw2-00, F list of hazardous wastes, at:

<https://www.pca.state.mn.us/sites/default/files/w-hw2-00.pdf>.

You may reclaim and reuse your used solvents, including gun cleaner and thinners. Once reclaimed, your used solvent is considered a product until it used again. Ensure you:

1. Count the maximum volume of used solvent you accumulate at any time each month before reclamation towards your hazardous waste generator status.
2. Add together the maximum volume you counted each month to determine the total amount to report annually to your hazardous waste regulator.

If your site is a Very Small Quantity Generator of hazardous waste (VSQG), you may dispose of your used solvent by mixing it into your used oil, as long as you follow the conditions described in MPCA fact sheet #w-hw4-30, Used oil and related wastes, at: <https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf>.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Rules, Chapters 7005, 7011, and 7045. Visit the Office of the Revisor of Statutes at <https://www.revisor.mn.gov/pubs> to review applicable Minnesota Statutes and Rules.

For more information, contact your metropolitan county hazardous waste office or your nearest MPCA regional hazardous waste staff. Notify the Minnesota Duty Officer immediately of any hazardous waste spill or incident. The Minnesota Technical Assistance Program can help you reduce your waste generation and cost.

Metro County Hazardous Waste Offices

Anoka	763-324-4260
.....	https://www.anokacounty.us/
Carver	952-361-1800
.....	http://www.co.carver.mn.us/
Dakota	952-891-7557
.....	https://www.co.dakota.mn.us/
Hennepin	612-348-3777
.....	http://www.hennepin.us/
Ramsey	651-266-1199
.....	https://www.ramseycounty.us/
Scott	952-496-8177
.....	http://www.scottcountymn.gov/
Washington	651-430-6655
.....	https://www.co.washington.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices)	1-800-657-3864
All offices	651-296-6300
.....	https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free	1-800-422-0798
Metro	651-649-5451

Minnesota Technical Assistance Program

Toll free	1-800-247-0015
Metro	612-624-1300
.....	http://www.mntap.umn.edu/