



PAPER

MANAGING SOLVENT-CONTAMINATED WIPIES



If you use solvents, the EPA provides an exemption for managing your solvent-contaminated wipes, pads and rags that can make your life easier.

Since January 31, 2014, the Environmental Protection Agency (EPA) has made it easier for facilities to manage wipes that were used to soak up or wipe certain common solvents. Certain wipes may be exempted from hazardous waste regulations as long as you manage them properly. This means you won't need to handle, process, or dispose of them as a fully regulated hazardous waste.

It's important to understand that when the regulation refers to "wipes," it includes wipes, shop towels (rags), pads (absorbent mats) and swabs.

Why should you care?

1. It should be much easier for you to manage your disposable wiper waste streams without having to deal with all of the obligations and restrictions included in hazardous waste procedures — such as solvent-contaminated wipes no longer needing to be manifested when sent off-site.
2. If you've been using a laundering service because they made it easier to handle your solvent-contaminated wipes, you may no longer need to. You can now use disposables, manage them yourself and save money. The rule spells out the right way to do this.
3. If you've been paying to dispose of solvent-contaminated wipes in a designated hazardous landfill, you can avoid those costs and use lower-cost, permitted municipal solid waste landfills.
4. Depending on how many solvent-contaminated wipes you generate, you may be able to improve your status as a waste generator and move from large quantity to small quantity generator.

The EPA estimates a potential savings of more than \$30K per year for Large Quantity Generators (LQG) of hazardous waste. Small Quantity Generators (SQG) can save over \$4K.



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Nearly every facility uses wipes, rags and mat pads for cleaning, absorbing and other purposes. Before this final rule was passed, managing all of those spent wipes properly could cause a lot of headaches for waste managers because of EPA's mixture rule. If the solvent being used on the wipe was on EPA's "F list" or exhibited the hazardous characteristic of ignitability, that wipe was considered to be hazardous and needed to be managed and disposed of in a very specific — and usually expensive — way.

Because of the complexity and effort required, many facilities opted to use laundered reusable wipes (shop rags) to avoid the hassle of managing solvent-contaminated wipes as hazardous waste. This was because solvent-contaminated **disposable** wipes were subject to stringent management rules while **reusable** wipes didn't always need to be manifested and did not contribute to a facility's Resource Conservation Recovery Act (RCRA) generator status.

The solvent-contaminated wipe rule provides solid and hazardous waste exemptions help to level the playing field between disposable and reusable wipes because you no longer need to manage solvent-contaminated **disposable** wipes as hazardous waste. You can dispose of them like other common waste, provided you handle them according to the simple guidelines the rule lays out.



Very often, using high performance, application-specific disposable wipes is preferable to reusable laundered wipes for critical wiping tasks. Single-use disposables are pristine when they arrive at your plant and provide a safer alternative to reusable wipes which have been proven to carry trace elements of metals and other contaminants even after being laundered.

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Solvent-Contaminated Wipes, Defined

Although there are hundreds of varieties, wipes can really be grouped into two main types: reusable and disposable.

Reusable wipes are traditionally made of woven cotton fibers. They are commonly supplied by a launderer who picks up the spent wipes and drops off laundered ones on a routine basis.

The composition of **disposable wipes** varies because they're designed to be task-specific. For example, disposable wipes used solely for drying hands are often made from recycled paper products, whereas disposable wipes used to clean precision parts are lint-free and often made of synthetic materials or microfibers.

Absorbent mat pads, like PIG Mat, meet the definition of "pad"—so if they are saturated with solvents listed in the exemption, they may be managed according to the provisions of the regulation.

Not all wipes are exempt from regulation. Wipes need to meet the criteria listed in the regulation to qualify for the exemption. EPA offers the following definition:

"A solvent-contaminated wipe is a wipe (i.e., a shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends or other material) that after use or after cleaning up a spill, contains a solvent that would be considered hazardous waste either because it is listed in the hazardous waste regulations, or because it exhibits the characteristic of ignitability. Solvent-contaminated wipes do not include wipes contaminated with hazardous waste other than solvents, or that exhibit the characteristic of toxicity, corrosivity or reactivity due to contaminants other than solvents."
[40 CFR 260.10]



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Specifically, the following wipes can be exempted from full regulation when managed under the new criteria:

- Wipes containing F001–F005-listed solvents [40 CFR 261.31] or corresponding P- or U-listed solvents [40 CFR 261.33] including:

Acetone	Isobutyl alcohol
Benzene	Methanol
N-Butanol	Methyl ethyl ketone
Chlorobenzene	Methyl isobutyl ketone
Cresols	Methylene chloride
Cyclohexanone	Tetrachloroethylene
1,2-Dichlorobenzene	Toluene
Ethyl acetate	1,1,2-Trichlorethane
Ethyl benzene	Trichloroethylene (reusable wipes only)
2-Ethoxyethanol	Xylenes

- Wipes that exhibit a hazardous characteristic resulting from a solvent listed in 40 CFR 261
- Wipes that exhibit only the hazardous characteristic of ignitability when containing one or more non-listed solvents

Through various tests and evaluations, the EPA has determined that solvent-contaminated wipes represented less than 0.032 percent of the total volume of solvent waste disposed of annually and that they do not pose a significant risk to human health or the environment when landfilled.



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Wipe Management

To be eligible for exemption, both reusable and disposable wipes must be managed properly while they are onsite at facilities, during transportation, and when they are laundered, dry cleaned, incinerated or land disposed. The management practices outlined in the exemption are designed to minimize health and environmental impact.

The main differences between the exemptions for reusable and disposable wipes are:

	Reusable Wipes	Disposable Wipes
Type of Waste	<p>Properly managed reusable wipes are not solid waste (and therefore, cannot be hazardous waste).</p> <p>40 CFR 261.4(a)(26)</p>	<p>Properly managed disposable wipes are solid waste but not hazardous waste.</p> <p>40 CFR 261.4(b)(18)</p>
After Use	<p>Reusable wipes may go to laundries or dry cleaners whose discharge, if any, is regulated under Sections 301 and 402 or Section 307 of the Clean Water Act.</p> <p>40 CFR 261.4(a)(26)(vi)</p>	<p>Disposable wipes may go to:</p> <ol style="list-style-type: none"> 1. Municipal waste combustors that are regulated under section 129 of the Clean Air Act; 2. A hazardous waste combustor, boiler or furnace regulated under 40 CFR parts 264, 265, or 266 subpart H; 3. Municipal solid waste landfills regulated under 40 CFR part 258; or 4. Hazardous waste landfills regulated under 40 CFR parts 264 or 265. <p>40 CFR 261.4 (b)(18)(vi)</p>
Exceptions	N/A	<p>Trichloroethylene-contaminated disposable wipes are not eligible for this exemption because trichloroethylene may pose a significant risk to human health and the environment when disposed of in a landfill.</p>



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Containers and Labeling

Both reusable and disposable wipes must be stored, accumulated and transported in containers that are properly labeled with the words “Excluded Solvent-Contaminated Wipes.” The containers must also be kept closed when wipes are not being added or removed and must not leak. Similar to EPA’s hazardous waste management standards, managing solvent-contaminated wipes in non-leaking, closed containers helps to minimize the likelihood of spills, fires and fugitive air emissions.

It can be inconvenient or impractical to properly (completely) seal a container (like a 20-, 30-, or 55-gallon drum) after each wipe is added during used wipe accumulation. According to the final rule, a container can be considered “closed” when there is complete contact between the fitted lid and the rim. An unsecured lid can easily be jostled out of position in a busy plant, and it’s common for workers to forget to replace it. That will put you out of compliance with the closed container reg.

One of the easiest and safest ways to comply with closed container regs is to use a latching lid with your wipe collection drum. Latching lids enable the user to open and re-close the drum securely in seconds rather than backing out the bolt/ring assembly for a tight fit every time you need to access the drum. When the container is full or when it is being readied for transport, it must then be “properly” sealed. When sealing for shipment, it is typically with the drum’s original lid.

To help facilities that may not generate large quantities of solvent-contaminated wipes, the regulation is performance-based and no single style of container is specified. Some examples suggested for wipe storage include:

- Open-head drums with latching lids
- Drums with draining screens at the bottom
- Other types of open-head containers with lids
- Containers with covers opened by a foot pedal
- Bags, provided they can meet the requirements of the standard



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Free Liquids

When the EPA was analyzing the impact of solvent-contaminated wipes on the environment, one of the parameters considered was that a majority of wipes that are landfilled are barely damp, and in some cases are mostly dry. To prevent containers of used solvents, referred to as “free liquid spent solvents,” with just a handful of wipes added from entering landfills, wipes must have no free liquids when they are shipped. Generally, this means that the wipes should not be dripping solvents out of them (the solvents should be absorbed and trapped in the wipe). If you are unsure about the “free liquid status” of your wipes, you can use the following procedure to test:

Generators can use the Paint Filter Liquids Test (SW-846, Method 9095B) to determine if the wipes being sent for laundering, incineration or disposal meet the “no free liquids” criteria. This test method was chosen because many states already use it to test materials that will be disposed of in municipal solid waste landfills. To perform this test, a wipe needs to be cut into small sections (less than 1 cm each), placed in a 60 +/- 5% mesh conical funnel and allowed to drain for 5 minutes over a graduated cylinder. If any liquid is present in the cylinder after 5 minutes, the material is considered to have free liquids.

To be clear, you do NOT need to conduct the above paint filter liquids test for all your wipes, but generators must ensure that if a wipe was subject to testing, it would pass. Wipes that are centrifuged, mechanically wrung, vacuum extracted or, perhaps easiest of all, placed in screen-bottom drums to drain, typically meet the requirements of the paint filter liquids test.

Free liquid spent solvents that are removed from wipes are not eligible for the exemption and must be managed accordingly under EPA’s hazardous waste regulations in 40 CFR 260-273. Liquid spent solvent waste may also count toward a facility’s monthly RCRA generator status.



Accumulation Time

To prevent wipes from being stored indefinitely onsite, they may only be accumulated for up to 180 days before being sent for laundering or disposal. Because reusable wipes are typically provided with a regular weekly or monthly service, and because disposable wipes can be managed with other solid wastes, the EPA felt that 180 days is a sufficient amount of time for wipes to accumulate before being transported to a handling facility.

To help ensure that wipes do not exceed the time limit, the accumulation start date must be marked on the container.

To help ensure that wipes do not exceed the time limit, the accumulation start date must be marked on the container. The start date is the day that the first wipe is placed in the container.

Handling Facilities

Solvent-contaminated wipes must be managed by:

- Laundries or dry cleaners that are governed under sections 301 and 402 or section 307 of the Clean Water Act – if they have any discharges;
- Municipal solid waste landfills regulated under 40 CFR 258 including 258.40 or a hazardous waste landfill regulated under 40 CFR 264 or 265; or
- A municipal waste combustor or other combustion facility that is regulated under section 129 of the Clean Air Act, a hazardous waste combustor regulated under 40 CFR 264 or 265, or a hazardous waste boiler or industrial furnace regulated under 40 CFR 266 Subpart H.

Like solvent-contaminated wipe generators, these facilities must accumulate, store and manage wipes in labeled, non-leaking closed containers when they are not being processed or cleaned. Handling facilities must also be able to contain any free liquids and manage them properly.



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Documentation

Generators must maintain documentation that they are managing excluded solvent-contaminated wipes. This helps to ensure that generators are maintaining compliance with the conditions of the exemption. Documentation must include:

1. The name and address of the laundry, dry cleaner, landfill or combustor that is receiving the wipes.
2. Documentation that the 180-day accumulation time limit is being met.
3. A description of the process the generator is using to meet the “no free liquids” condition.

There is no specific template required for documentation. Generators may use service agreements, contracts or invoices to satisfy the first two documentation requirements.

Implementation

Industry groups have been petitioning the EPA to exempt solvent-contaminated wipes since the 1980s. Mathy Stanislaus, EPA Assistant Administrator for the Office of Solid Waste and Emergency Response said of the ruling:

“Today’s rule uses the latest science to provide a regulatory framework for managing solvent-contaminated wipes that is appropriate to the level of risk posed by these materials. I’ve heard directly from stakeholders about the benefits of this rule and the need to finalize it. The rule reduces costs for thousands of businesses, many of which are small businesses, while maintaining protection of human health and the environment.”

It’s been estimated that facilities will save more than \$20 million annually — and with a little effort, you can reap the rewards this exemption provides.



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