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09-002

Revised 07/2025

F-Listed Spent Solvent Hazardous Waste Determinations

This guidance document has been produced by the Nebraska Department of Water, Energy, and Environment (DWEE) to discuss common F-listed wastes, how to determine if you have F-listed waste, and what special conditions may apply. The regulations applying to this topic can be found in Nebraska [Title 128 – Hazardous Waste Regulations](#).

What are the most common F-listed wastes?

An F-listed waste is a hazardous waste that is from nonspecific sources. Several common F-listed wastes are generated by solvent use and are certain spent solvents that are very specifically defined in Title 128, Chapter 3, §013 and Table 4. The most common are F001, F002, F003, F004, and F005. These five wastes all have the words “spent solvent” in their definition and a waste can only be classified as one of these five if the waste is a spent solvent that meets all the applicable conditions in the definition. There are many other F-listed wastes, but they are far less common than these five spent solvent listings.

What does “spent solvent” mean?

A solvent is considered “spent” when it has been used and is no longer fit for use without being regenerated, reclaimed, or otherwise reprocessed. The spent solvent listings (F001-F005) cover only the solvents that are used for their solvent properties, that is, to dissolve or mobilize other constituents. F001-F005 solvents that are used as ingredients in a material are not considered to be spent solvents and unused solvents cannot be spent solvents.

Spent solvents do not include process wastes where solvents were used as reactants or ingredients in the making of commercial chemical products. The products themselves are also not covered. For example, a paint that has been thinned with a solvent included in the F-listed wastes is not covered under the F001-F005 spent solvent listings.

Who generates F-listed wastes?

Businesses, governments, schools, and organizations that generate hazardous waste have the potential to generate F-listed waste. Household wastes are excluded.

How is the F003 listing unique?

The hazard code associated with the F003 listing is the characteristic of ignitability. If the waste no longer exhibits the characteristic of ignitability, then it is no longer considered a hazardous waste (Title 128, Chapter 2, §007.03). The land disposal restrictions will still apply to this waste if it lost the characteristic in the time between generation and land disposal.

Mixtures containing F003 spent solvents are covered under the F003 listing only under two conditions:

1) The mixture contains only F003 constituents

OR

2) The mixture contains one or more F003 constituents and a total of 10% or more of the other listed solvents prior to use

Example 1: A spent solvent containing 70% xylene (F003), 6% perchloroethylene, and 24% naphtha before use.

This is not an F003 waste because it fails to meet either condition. This mixture would likely be a characteristic ignitable waste (D001).

Example 2: A spent solvent containing 70% xylene (F003), 6% perchloroethylene, 5% toluene (F005), 5% methyl ethyl ketone (F005), 5% carbon disulfide (F005), and 9% methylene chloride (F002) before use.

This is an F003 waste because it meets condition 2.

Example 3: Spent solvent containing 70% xylene (F003) and 30% Stoddard Solvent before use.

This is not an F003 waste because it fails to meet either condition. This mixture would likely be a characteristic ignitable waste (D001).

What does “spent solvent used in degreasing” mean in the F001 listing?

The F001 listing should be used when the listed solvents are used in large-scale industrial degreasing operations such as cold cleaning, vapor degreasing, and fabric scouring.

The F002 listing should be used when the listed solvents are used in equipment cleaning or in smaller scale degreasing operations involving repair work such as industrial maintenance and repair, commercial service and repair, and consumer performed maintenance and repair that do not use industrial degreasing processes as described above.

Do I have to do analytical testing on my F001-F005 waste?

F001-F005 wastes are determined solely by the definitions given in Title 128, Chapter 3, §013 and Table 4. If you were to send samples for analytical testing, the result would be unlikely to yield much information of value other than stating the presence of a constituent or determining that the waste has the characteristic of ignitability. A Safety Data Sheet (SDS) for the solvent in question should have information on if the solvent has the characteristic of ignitability. The presence of a constituent in the waste is not enough to determine if the waste meets the definition of a F001-F005 spent solvent listing. The characteristics of ignitability can be found in Title 128, Chapter 3, §007.

RESOURCES:

- DWEE Home Page <https://dwee.nebraska.gov/>

Contacts:

- DWEE Main Number (402) 471-2186
- DWEE Toll Free Number (877) 253-2603
- DWEE Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: DWEE.moreinfo@nebraska.gov

DWEE Publications:

- Environmental Guidance Document – “Waste Determinations and Hazardous Waste Testing”
Guidance documents are available on the DWEE website by clicking “Visit Nebraska Department of Environment and Energy (DEE),” selecting “Forms,” and “Publications, Grants & Forms.”
- [Title 128 – Nebraska Hazardous Waste Regulations](#)
Titles are available on the DWEE website by clicking “Visit Nebraska Department of Environment and Energy (DEE),” selecting “Resources and Services,” “Laws & Regulations,” and “Rules & Regulations.”

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