

FOAM DISPOSAL GUIDELINES



HD foam concentrates are formulated for minimal environmental and ecological impact. However, like all foams & foam concentrates, these could have some very minor effect on the environment under certain conditions and circumstances. Measures should therefore be adopted to dispose the foams responsibly and carefully in accordance with relevant liquid waste disposal regulations and the guidelines given in this document. All of HD foams based on C6 fluorocarbons have very low toxicity and do not bio-accumulate, however those are persistent in the environment.

All types of foams need to be disposed off as per below guidelines, local regulations/authority instructions and government norms.

Foam-Water Solution

Foam water solution is generally discharged under either controlled conditions (e.g. training exercises, foam system commissioning and maintenance tests) or uncontrolled conditions (e.g. manual firefighting and vapour suppression operations, foam system activation).

Foam-water solution should be contained and disposed of in an environmentally responsible manner.

Ideally, it should never be dispersed into water courses and foul water drains without the prior consent of the local authority.

There are a variety of containment measures that may be implemented. These could also be some temporary arrangements instead of a permanent one. The relevant local authority needs to be consulted for practical advice on the most appropriate containment measure.

Once the foam-water solution has been contained, the most common method of disposal is to treat it biologically in a waste water treatment plant (WWTP) or an Effluent Treatment Plant (EPT).

A WWTP should be contacted prior to discharge. In most cases it will require a Material Safety Data Sheet (MSDS) of the foam concentrate (which has the information on composition, BOD, aquatic toxicity), an estimate of the total volume of foam-water solution to be discharged and the anticipated timing of the discharge. WWTP may require the foam-water solution to be diluted in advance.

Foam-water solution pre-treated in oil/water separators may emulsify with hydrocarbon fuels and so carry them over into the water stream. Synthetic detergent based foams have a greater tendency to emulsify than natural protein-based foams. Foam-water solution generally exhibits low toxicity to bacteria in WWTPs. Natural protein-based foams exhibit lower toxicity than synthetic foams.

Emergency Containment

This is applicable when foam-water solutions are used in case of emergency testing, fire, or other uncontrolled conditions. In case cases ensure the following:

1. Block drains to prevent contaminated foam solutions from reaching the common or municipal sewage systems.
2. Use sand bags to create perimeter bund.
3. Use pits or trenches preferably with an impermeable lining.



- Use of pits or trenches, again preferably with an impermeable lining to prevent seepage of foam to ground.
- Use of portable storage tanks or drums.

Foam Concentrate Disposal

Foam concentrate may need to be disposed of in the event of a spillage or if it is judged unsuitable for use as a result of age or being diluted or contaminated by foreign materials.

It should be taken to an approved disposal site by a licensed waste disposal contractor for disposal by controlled release to a WWTP, incineration, or liquid landfill.

A common method of AFFF disposal is high-temperature incineration. This needs heating the substance up to at least 1000°C, with a minimum residence time of two seconds. An accredited disposal company has the knowledge, resources, and preventative measures to complete this process safely and effectively.

Furthermore, foam concentrate wastes containing fluorinated organic compounds can either be disposed of by high temperature incineration or be treated to remove the fluorinated organic compounds for separate incineration. Subsequently treated in an Effluent Treatment Plant.

In an event of a spillage or leakage from a damaged foam container, the recommended approach to dealing with foam concentrate residues is to physically absorb them onto a suitable solid particulate material. Absorbents are available as granules, powder, sheets or pillows. This material can then be disposed of by incineration or landfill, in accordance with local regulations.

Note

Further Information - Refer to National Fire Protection Association Code 11, including its Annex E, "Foam Environmental Issues"

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Note: Please consider ISO 14000 series standards for general guidelines of environmental protection.

NOTICE

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