Formaldehyde Spill Response using the FNC-2 Kit

User Guide

Formaldehyde Neutralization Solution
2-Component Kit System

Formaldehyde Neutralization Solution quickly and efficiently neutralizes Formaldehyde solution spills. It completely immobilizes full-strength and working solutions (4–37%) within 2–10 minutes, and eliminates vapor emissions. The residues are environmentally harmless and safe to handle.

One liter of SpillSolv® Formaldehyde Neutralization Solution will neutralize approximately:

670 mL of Formaldehyde 37%
2.5 L of Formaldehyde 10%
4 L of Formaldehyde 4%
4 L of Neutral Buffered Formalin 4%

NOTE: Buffered Formaldehyde solutions may require more product for complete neutralization. **NOTE:** contaminated pads can be neutralized with solution as well.

Prior to use

1. WARNING (THESE ARE U.S. type warnings): Formaldehyde is a carcinogen and has an extremely low Permissible Exposure Level (PEL). A (full face…because it is irritating…but goggles will probably do) air purifying respirator with proper cartridges or a Self Contained Breathing Apparatus (SCBA) should be used when responding to a formaldehyde release. A respirator not equipped for formaldehyde provides no protection to the responder during a release, but can produce a false sense of security.
2. Obtain and use other personal protective equipment appropriate to the spill situation. This may include clothing, goggles or a face shield, rubber gloves, and boots. **3.** Check the airflow in the spill area. If possible, approach the spill from the upwind side. It is important to avoid breathing vapors from the spilled formaldehyde. It is also important to contain the flow of the spill. If containment requires working downwind, caution is required to avoid breathing vapors or aerosols.

Directions for use (immobilization and subsequent neutralization)

I. Immobilization

1. Use drain mats or absorbent booms to block run-off into drains.
2. Apply FAS around the edge of the spill area from the shaker bottle. This process, called diking, is intended to prevent the spill from spreading. **CAUTION:** Take care to avoid splashing the spilled material. **3.** When diking is complete, begin applying the powder inward from the edges, working towards the center of the spill. Cover the entire spill in this manner. **4.** Observe that the mixture of powder and formaldehyde will begin to gel. Allow 2-4 minutes for the mixture to gel fully.
5. Collect the gelled mixture into appropriate container.(This is where a scoop would help) A small amount of the SpillSolv® Formaldehyde Absorbent & Immobilizer is able to immobilize a much larger volume of spill. A 200-gram bottle can absorb up to 10 liters of spilled formaldehyde solution.

II. Neutralization and disposal

After the gelled formaldehyde spill has been collected into a suitable container, it is ready to be neutralized with the two-part SpillSolv® Formaldehyde Neutralization Solution, as follows:
1. Add the entire contents of the Formaldehyde Neutralization Concentrate Activator (50-mL bottle) to the bottle of Formaldehyde Neutralization Concentrate (FNC)(base) to make 1 liter of activated neutralization solution. Shake well to mix powder and liquid. The color of the base will change to yellow.
At this point place a small amount to the FNC solution on a rag or absorbent sheet and wipe the spill surface to neutralize any formaldehyde residues. It can be rinsed later.
2. Add the mixed neutralization solution to the gelled residue and mix thoroughly. Ensure that sufficient FNC Solution is added to turn the gel into a liquid/slurry to assure complete neutralization.
3. Allow to stand for at least 30 minutes.
4. Dispose of the neutralized formaldehyde spill in accordance with your company's procedures, as well as local, state, and federal regulations.

NOTE: Activated FNC 2 solution has a shelf life of 3 to 6 months, when stored in cool conditions.

Activated Formaldehyde Neutralization Solution can also be used to treat the spill directly, without prior immobilization. In this case, higher concentration formaldehyde solutions are transformed into a semisolid residue within 2-10 minutes, possibly longer at low temperatures. Dilute solutions require the same length of time, and form a slurry of suspended residue. This approach is useful in a well contained spill area BUT it is a potentially longer and messier procedure. The standard FNC procedure should be followed here.