

Bad Things Can Come in Small Packages

An incident occurred during the decontamination of a pail containing hazardous waste. An operator was neutralizing a small quantity of process waste that had been drained into a pail during a maintenance operation. It contained small amounts of metallic sodium, a material that reacts violently with water. The procedure was to add dry methanol to the waste in the pail, warm it, and allow it to react for 6–7 h. The operator followed the procedure and, after the reaction period, poured the liquid waste from the pail. He was preparing to flush the pail when more material from the pail spilled and contacted water from a recent rain, setting off an exothermic reaction that injured him.

The pictures show pails, drums and other small containers of hazardous waste stored prior to disposal. It is important to remember that there can be serious hazards, even for hazardous materials and wastes stored in relatively small quantities. In particular, small containers can be very hazardous for people working near the materials – perhaps adding more waste to the containers or conducting some kind of neutralization, decontamination or other chemical operations. It is also important to consider the storage conditions for hazardous waste – for example, if there are hazards due to high temperatures (polymerization, decomposition) or low temperatures (freezing).



Why Did It Happen?

The waste pail was found containing 2–3 in. of sludge from the maintenance procedure, and was not labeled. The operator asked other operators about the waste and was told to dispose of it in the usual way. However, the sludge contained a layer of solids that prevented the sodium from contacting the methanol and reacting as desired. The procedure did not require the operator to mix the neutralized solution to ensure complete reaction.

What Can You Do?

- Label all containers, especially those containing process waste.
- Remember that even small containers can present a big hazard.
- Test unknown materials so you know what they are, and so that safe waste disposal procedures can be developed.
- Make sure that maintenance procedures include instructions on safe waste labeling and disposal.
- During routine drainage operations, report anything unusual (for example, sludge or unexpected solids) to your supervisor.

Little bombs can cause dangerous explosions

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